



Instructor's Manual

for K-12 Education

Advanced Customer Solutions

ALEKS Corporation

ALEKS Instructor's Manual for K-12 Education, Version 3.18.
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Preface

Welcome to ALEKS, one of the most powerful educational tools available for learning mathematics. ALEKS combines advanced learning technology with the flexibility of the Internet, and provides an interactive tutoring system with unmatched features and capabilities.

The innovative features of ALEKS open new horizons for educators and learners alike in any educational context. The ALEKS class management system enables instructors and administrators to efficiently monitor student progress and provide focused instruction. With its unprecedented use of Artificial Intelligence, ALEKS determines quickly and precisely what your students know and what they need to learn, guiding them down individualized learning paths to mastery. The programs used are customizable, letting you conveniently add or subtract topics. As ALEKS is accessed on the Internet, no complicated technical preparation is needed—and your students can work at any time, from home or from the classroom! ALEKS can also be integrated with a variety of textbooks.

It's a personal tutor for each of your students, at a fraction of what such services normally cost.

The benefits of using ALEKS are dramatic. Students work in a dynamic, interactive learning environment on precisely those materials that they are individually ready to learn, building momentum toward mastery. Students can access their ALEKS account around their own schedules and work on what they are ready to learn now. It is the personalized, “just-in-time” learning system.

ALEKS may be used in a variety of classroom situations—whether in a traditional classroom, or in a self-directed or distance-learning environment.

Using the Student Access Code along with the Course Code provided by the instructor, the student registers on the ALEKS website.

This Instructor's Manual is intended to provide complete information on the functioning of ALEKS. A description of its contents can be found in Chapter 1.

Please also take time to explore the ALEKS website: it is a valuable source of information (<https://www.aleks.com>, Fig. 3.1). The website includes tours, overviews of ALEKS course products, troubleshooting and support information, training resources,

and user guides. It also contains information on the theory and research behind ALEKS, forums for the exchange of ideas with other educators, and brief, recorded on-line training segments. To find the resources specific to the educational field you are in, click on the appropriate link on the ALEKS home page.

Chapter 1

Introduction

1.1 What is ALEKS?

The ALEKS system is the product of years of cutting-edge research into the mathematical modeling of human knowledge (Chap. 9). The creators of ALEKS are cognitive scientists, software engineers, and university professors. In designing ALEKS, their goal was to achieve the utmost simplicity of use without compromising the depth, rigor, or richness of mathematics instruction at its inspirational best. ALEKS is a tool to empower both instructors and learners of math. It opens doors into the assessment and representation of knowledge, and it breaks down barriers to success by recognizing the vast diversity of paths that lead to mastery. The ALEKS system can make a radical difference in how math learning is experienced.

ALEKS is an online system for the assessment and individualized teaching of mathematics. It can be accessed on the Internet from virtually any computer and is designed to allow the monitoring and management of students and classes at the instructor, school, and system levels.

The core of the system is an efficient, adaptive assessment engine that determines quickly and precisely what an individual student knows (an assessment is also called a knowledge check). Based on assessment data, the system is able to offer material that the student is ready to learn.

The ALEKS Learning Mode includes explanations and algorithmically generated practice problems, ongoing assessment of student knowledge, an online math dictionary, and facilities for review and collaborative help. It can be used on an independent basis or as a supplement to classroom instruction.

1.2 The ALEKS Instructor's Manual

The purpose of the ALEKS Instructor's Manual is to provide instructors with complete information on the operation of the system. Even though ALEKS is not complex, our goal is to offer instructors a clear idea of everything ALEKS does, how it works, and where to find answers to questions.

ALEKS is user-friendly, and may be used without help from the Instructor's Guide. Feel free to use the system now. If questions arise, or if you want to learn more about ALEKS, this Instructor's Guide is intended as a convenient and comprehensive reference.

NOTE. For a brief, comprehensive overview of ALEKS, turn directly to the "Frequently Asked Questions" in Chapter 10.

- The first chapters are those most likely to be used by instructors new to ALEKS. Chapter 2, "Quick Start," contains a concise checklist for those new to ALEKS. Chapter 3, "Setup Guide for Instructors," provides all of the information necessary for preparing to use ALEKS with one or more classes. This ranges from technical and installation requirements through the students' first ALEKS session (which typically involves registration, tutorial, the Initial Assessment (or Knowledge Check), and entry into the Learning Mode).
- Chapters 4 through 7 contain descriptions of the principal parts of the ALEKS system: Assessment Mode, Learning Mode, and the Instructor Module.
- QuickTables, a tool for mastering math facts, is described in Chapter 6.
- The Instructor Module is discussed in Chapter 7.
- Chapter 8 is a brief guide to teaching with ALEKS, describing a range of scenarios and the ALEKS features that support them.
- Chapters 9 through 11 provide additional information that may be necessary or of interest to instructors using ALEKS. Chapter 9, "Knowledge Spaces and the Theory Behind ALEKS," explains the history of Knowledge Space theory and its fundamental concepts, along with the evolution of ALEKS itself. Also included is a bibliography for those seeking to understand the theory behind ALEKS in greater depth. Chapter 10 provides answers to frequently asked questions about ALEKS. Chapter 11 gives the information necessary for obtaining technical and other support.
- Appendix A contains the complete text of the ALEKS Student User Guide. Appendix B contains content summaries for ALEKS course products.

Chapter 2

Quick Start

The purpose of this chapter is to provide a summary of the steps involved in starting a class with ALEKS.

2.1 Obtaining a Class Code

In order to use ALEKS with your class, you will need to have a Class Code. You give this code to the students in your class; they will use this Class Code to register. The Class Code is all your students need to register with ALEKS. When they register, they will receive a Login Name and Password; after this they will no longer need the Class Code. Students should not use the Class Code to register a second time, as doing so will create a new account in their name, unconnected with the first.

You can have as many classes and sections as you need or want in ALEKS. For each class or section, there is one unique Class Code. Students who register using this code will be enrolled in the corresponding class. Students who accidentally enroll in the wrong class can easily be moved to the right one at any time. (Please note that moving a student from one class to another in ALEKS may trigger a new assessment or knowledge check.) **To obtain the Class Code for any class, log on to your instructor account, on the Instructor Administration menu, select Class List (Sec. 7.4.34).** The Class Code will appear in the right-hand part of the screen.

You will normally be provided with an instructor Login Name and Password by ALEKS Corporation; otherwise, a colleague at your school with administrator privileges in ALEKS can also create an instructor account for you. Once you are logged on to ALEKS as an instructor, you can create one or more classes through selecting **New Class**.

2.2 Registering Students

Students should use the following steps to register.

1. Go to the ALEKS website.

<https://www.aleks.com>

2. Click on the **SIGN UP NOW!** link to the left of the page, under the space for Registered Users. (This is the only time they will click on that button.)
3. On the page that follows, enter the Class Code in the spaces provided for "Using ALEKS with a Class?" (to the left of the window). **Do not use the button on the right-hand side.**
4. Confirm enrollment information.
5. Enter other information as prompted and choose a password.
6. Record the Login Name provided by the system.
7. Wait for the instructor to authorize the registration. They can log off at this point and log back in later, using the Login Name and Password provided. As soon as the instructor authorizes their registration, they will be able to use their new ALEKS account.

NOTE. For a complete description of how instructors authorize the registration of their students, see Sec. 3.6.

8. Begin using ALEKS by taking the student tutorial and an Initial Assessment (Knowledge Check).

Students will subsequently use their Login Name and Password to enter their accounts.

Chapter 3

Setup Guide for Instructors

3.1 Instructor Preparation



Figure 3.1: The ALEKS Website

ALEKS has been designed to be user-friendly and intuitive. However, taking the time to study all materials provided to you, including the Instructor’s Guide, and trying out the system, can provide valuable insight into the system’s functioning and underlying ideas. The administrator for ALEKS can contact ALEKS Customer Support for assistance at any time (Chap. 11).

3.2 System Requirements

The following table presents the system requirements for ALEKS in summary form.

	PC	Macintosh	Chromebook
Operating System	Windows 7+	MacOS 10.7+	Chrome OS
Processor	Any	Any	Any
RAM Memory	64+ MB	64+ MB	Any
Browser	Explorer 11+, Firefox 25+, Chrome 30+	Safari 6+, Firefox 25+, Chrome 30+	Chrome 30+
Screen Resolution	800x600 (1024x768 for Chemistry)	800x600 (1024x768 for Chemistry)	Any

Figure 3.2: System Requirements

Tablets. All courses are desktop and tablet compatible with the exception of AP Statistics (Quantitative), High School Prep for Statistics, Business Math, Fundamentals of Accounting, and Introduction to Statistics. These courses are not compatible with tablet devices.

Note that any kind of Internet connection (cable, ISDN, DSL, or wireless) usually available in a computer lab is adequate for use with ALEKS.

3.3 Instructor Module

To enter the ALEKS Instructor Module, log on to ALEKS with your Instructor Login Name and Password. The Instructor Module lets you monitor and manage your ALEKS classes. The Instructor Module is designed for ease of use; it guides users through the steps needed to accomplish tasks in such a way that no separate training is needed and mistakes or confusion are unlikely. See Chapter 7 for a complete description of the Instructor Module.

3.4 Student Orientation

It is strongly recommended that the first ALEKS session be conducted under supervision, perhaps with another instructor on hand, to help your students get started. It is not generally necessary to schedule a separate orientation meeting before the students begin using the system. It is also advisable for students to have pencil and paper for assessments (knowledge checks) in ALEKS. A calculator is included in ALEKS when

needed. Remind your students that help is not permitted during the assessment, because this will impair the accuracy of the results, and consequently hinder that student's progress in the Learning Mode.

If possible, the students' first session with ALEKS should allow them to complete their knowledge checks (assessments) and begin work in the Learning Mode. If the students are unable to finish their assessments during this time, ALEKS will automatically keep their place. The next time the students log on to ALEKS they may continue without any loss of work.

3.5 Registration

Students register with ALEKS by going to the ALEKS website and clicking on **SIGN UP NOW!** This will be expedited if the browsers used by the students have **Bookmarks** or **Favorites** pointing to the website.

NOTE. In order to register, all students must have the Class Code for the class that you are teaching. The Class Code will either be sent to you by ALEKS Corporation (in your ALEKS Inbox), or be obtained when you create the class (Sec. 7.4.1). You are responsible for giving this code to the students at the time of the first session (Sec. 2.1).

The student registration process is described in detail in the Student User Guide (Appendix A). There are complete online instructions for every step of this simple procedure. Among other information, students can supply their Student ID number (if you wish to have this in the system). Special care should be taken in entering the latter, as the system cannot detect mistyping. The Student ID is optional information.

Near the conclusion of Registration students receive a Login Name and choose a Password. These should be noted carefully, as they will be essential for all further work with ALEKS. Students should choose a password they will remember easily but that will be hard for others to guess. Login Name and Password can be typed with upper or lower-case letters. Neither may contain spaces or punctuation. The Password must contain at least 6 characters.

At the end of Registration, students are asked to wait for their instructor's authorization. For a complete description of how instructors authorize the registration of their students, see Sec. 3.6. The students can log off at this point and log back in later, using the Login Name and Password provided. As soon as the instructor authorizes their registration they can start using ALEKS.

3.6 Instructor Authorization of Student Registration

The following is a more detailed description of the student registration process, highlighting the actions by which you authorize students' registration.

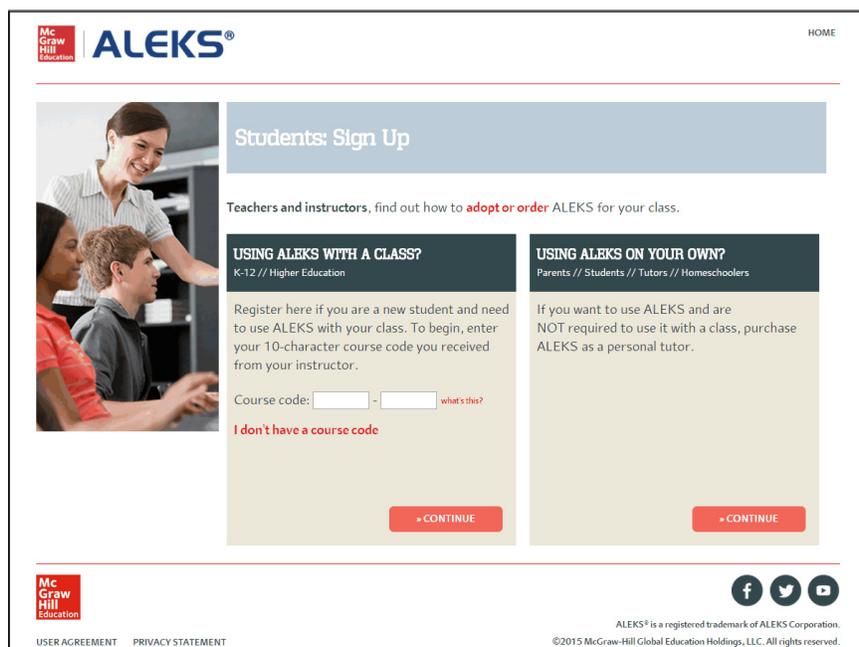


Figure 3.3: Registration

A student wishing to register with ALEKS begins on the ALEKS home page by clicking on the link marked **SIGN UP NOW**, located to the left of the home page, under the space for Registered Users (Fig. 3.1).

Next the student is asked to enter the Class Code which has been provided by the instructor (Fig. 3.3). Since each Class Code is assigned to a class defined by grade level, the Class Code entered by the student tells ALEKS the grade level at which the student is seeking to register. The spaces for this code are in the left-hand part of the window. Do not use the button on the right-hand side of the window.

Following entry of the Class Code, the student is given information on the class selected and on the process of beginning to use ALEKS.

Subsequently, ALEKS asks for full first and last names, and then provides a Login Name consisting of the student's first initial, last name, and usually a number (Fig. 3.4). The student is also provided with a password.

Students have the opportunity to enter an email address and a Student ID number. Students are not required to provide this information.

At this point the student is told that authorization is needed from the instructor before registration can be completed (Fig. 3.5). Until the instructor logs onto ALEKS and provides authorization, the student will not be able to get further than this page.

Mc Graw Hill Education | **ALEKS**[®]

1 CONFIRM COURSE CODE 2 **STUDENT INFORMATION** 3 ACCOUNT CREATION

STUDENT REGISTRATION: STUDENT INFORMATION
Fields marked with "*" are required.

Enter Your Personal Information

First Name: *

Middle Initial:

Last Name: *

Optional - Enter Your E-mail Address and Student ID Number

If you enter an e-mail address, we will send you a confirmation of your ALEKS login name and password.

E-mail address: Optional

If you have a student ID number that was assigned to you by your school, you can enter it below.

Student ID#: Optional [what's this?](#)

[» CONTINUE](#)

Figure 3.4: Registration (continued)

ALEKS[®] Hi, Carly! ▾

MY CLASSES [+ NEW CLASS](#)

Active (0)
You have no active classes. Click on the "NEW CLASS" button above to enroll in a new class.

Pending Instructor Authorization (1)

Individual School

Pre-Algebra
⚠ *Pending Instructor Authorization*
Instructor: Mrs. Varney
Last Login: *pending*
[Show more](#) | [Switch class](#)

Inactive (0)
There are no inactive classes.

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[User Agreement](#) - [Privacy Statement](#)

Figure 3.5: Registration (continued)

Once authorization is provided, the student will be able to click **Next** and begin using ALEKS. If the instructor cannot authorize immediately, the student is able to log off at this point and log back on at a later time using the Login Name and Password provided; if the instructor has authorized registration, the student will then begin using ALEKS.

The screenshot shows the ALEKS instructor dashboard for Janet Mello. The top navigation bar includes 'CLASS' and 'STUDENT' tabs. The main content area is titled 'Janet Mello - Dashboard' and contains three main sections:

- Instructor Information:** Displays Janet Mello's profile, last login date (06/23/2014), email (rvarney@aleks.com), total students (2), and total classes (1). There is an 'Authorize Students' button with a count of 1.
- Recently Viewed Classes:** A table showing classes and the number of students:

Class	# of Students
Lv5	2
Period 1	0
6th Period	0
Period 2	0
A2 with Trng	3
- Announcements:** A section titled 'Student Groups' with a 'Create group' button and a description: 'Create group filter report entries to group. To groups, cl Groups in Administra'.

Figure 3.6: Registration (continued)

The screenshot shows the 'Janet Mello - Authorize Students' page. It includes a message: 'The following students are awaiting authorization to start using ALEKS. Please select the names of the students you want to authorize, and select an action.' A note states: 'Note: Students should only have one ALEKS account registered per class. If you suspect a duplicate account, use the Do Not Authorize action to remove the account from the table.'

Below the message, there is a table of subscriptions:

Subscriptions	Available	Marked to Authorize
K12 pilot - 12 Month	28	0
K12 pilot - One Month	33	0

There is also a 'Need More Subscriptions?' section with a link to 'Order Subscriptions'.

Figure 3.7: Registration (continued)

In order to authorize registration, log on to your instructor account using the Login Name and Password received at registration or from ALEKS Corporation. If there are students in the class awaiting registration, on your Dashboard, you will see **Authorize Students** (Fig. 3.6). To authorize students, select **Authorize Students** from the **Instructor Administration** menu (Fig. 3.7).

3.7 Pre-Registration

The ALEKS Pre-Registration function allows teachers to register a group of students at the same time, without the students' needing to register themselves individually. To use this feature, from **Home**, select **Instructor Administration**, followed by **Enroll/Pre-Register**. This link is also available on the **Class Administration** menu.

You have the option of copying and pasting data from an existing Excel document or other electronic spreadsheet or of entering the students' information manually. In either case, the minimum information required is the first and last names of the students; other information is optional. If you choose to copy-and-paste, there is a text box that allows you to paste the data directly. The information will then be organized into rows and columns, and you can select the headings for each column. Once the data is saved, the Login Names and Passwords for the new accounts will be displayed, and will also be sent to you as a message.

If the **By Typing** option is selected, you will see a spreadsheet where you can enter the First Names, Last Names, and other data for your students. The procedure is otherwise as described above.

NOTE. When registering students in this manner, the school must have the appropriate number and type of subscriptions available to register all of the students in the class.

3.8 Batch Registration

ALEKS school and district administrators can quickly register multiple students using the School and District Batch Registration feature. The Batch Registration feature is intended to be used when registering 100 or more students. If registering less than 100 students, the ALEKS Pre-Registration feature is preferable to Batch Registration.

ALEKS Batch Registration allows ALEKS administrators to:

- Generate new ALEKS classes.
- Register new students in the appropriate classes.
- Generate new ALEKS instructors accounts.

3.8.1 Batch Registration Process

The Batch Registration feature can be accessed through your ALEKS administrator account as follows:

School Administrators

- To batch register students, select **Home**, **Institution Administration**, followed by **Batch Registration**.

District Administrators

- To batch register students at more than one school in the district, select **Home**, **Institution Administration**, followed by **Batch Registration**.
- To batch register students at a school, select a school from the Institution tab, select **Subscriptions**, followed by **Batch Registration**.

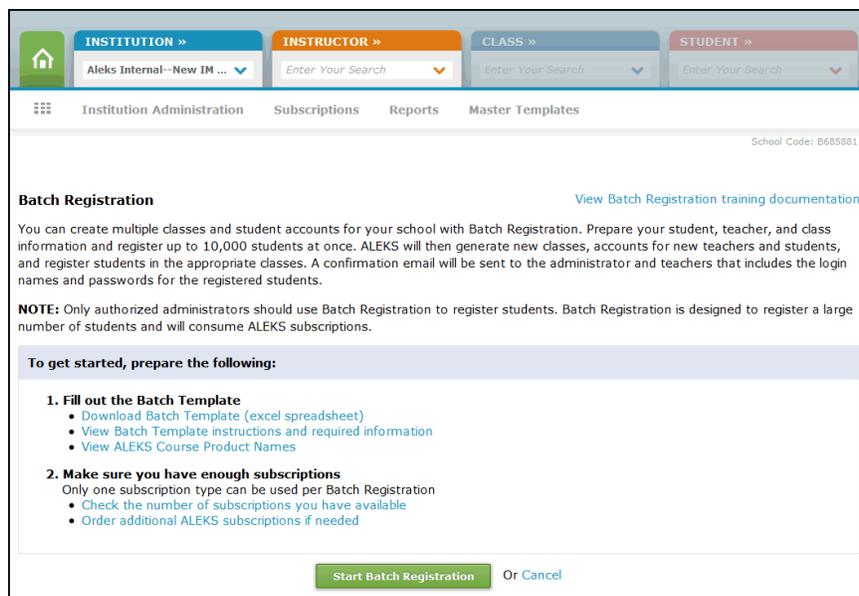


Figure 3.8: School Batch Registration

Before you begin:

1. Download and complete the Batch Template (See Sec. 3.8.2).
2. Check the number of subscriptions you have available (Fig. 3.8).

STEP 1. Begin Batch Registration

- Select a starting term from the drop-down menu.
- Select a subscription type. **Use one subscription type per Batch Registration process.**
- When more subscriptions are needed you can use the link available to order more.

STEP 2. Upload the Batch Template

- Use the **Browse** button to upload the Batch Template file (only the extensions .xls and .xlsx are accepted).

- Click on the **Next** button to begin the upload.

STEP 3. Summary of information

- Review the information displayed on the screen after the upload.
- If satisfied with the data entered, click to authorize the use of the required subscriptions or cancel the Batch Registration process.

After the administrator authorizes the batch to be processed, they will receive an email indicating that a Batch Registration is in process. The email is a summary of the subscription type being used and approximately how long the process will take.

NOTE. Students already registered, but included in the Batch Template, will not be registered twice. These students will appear in red.

3.8.2 Batch Template

	B	C	D	E	F	G	H
1	IMPORTANT: Begin entering your information on Row 3. DO NOT ADD, DELETE, OR REARRANGE any of the columns. You can only use ONE subscription type per batch.						
2	Class Period (optional)	Teacher First Name	Teacher Last Name	Teacher Email	Student First Name	Student Last Name	Student ID Number
3	Fa 2012	Mary	Smith	msmith@***.com	John	Sutton	student-123
4	Fa 2012	Mary	Smith	msmith@***.com	Ryan	Jones	student-111
5	Fa 2012	Mary	Smith	msmith@***.com	Mark	Garcia	student-023
6	Fa 2012	Mary	Smith	msmith@***.com	Mike	Lee	student-323
7							
8							
9							
10							
11							
12							

Figure 3.9: Batch Template

The Batch Template is a preformatted spreadsheet that contains column headers based on the required information needed to process a Batch Registration. Administrators should not edit, add, delete, or rearrange any of the columns in the spreadsheet. Administrators must click on the **Download the Batch Template (excel spreadsheet)** link and save it to their computer (Fig. 3.8). If you need guidance on how to fill out the Batch Template, click on the **View Batch Template instructions and required information** link. Clicking on this link will open a pop-up. Administrators can refer to this pop-up while entering data into the Batch Template.

ALEKS administrators must enter required information in all column headers highlighted in yellow (Fig. 3.9). Once the Batch Template is filled out, it is important for you to check the spreadsheet for any incomplete data before processing the Batch Registration. A correctly completed spreadsheet will help prevent having to correct errors that may be found during the registration process. Batch Registration allows instructors to register up to 10,000 students per batch process.

3.8.3 Batch Confirmation

ALEKS automatically sends a confirmation message to the administrator when the Batch Registration is completed. Instructors of each newly created class will receive a message containing the login names and passwords for the registered students. The administrator will also receive a copy of each message.

3.9 Tutorial

Following Registration, the students enter a brief tutorial on the use of ALEKS input tools, also called the **Answer Editor Tutorial** (Sec. 4.4). There are separate tutorials for different subjects, since the specific tools for them differ somewhat. The ALEKS Tutorial provides ample feedback to ensure that students complete it successfully.

3.10 First Assessment

Immediately after the tutorial, students proceed to their Initial Assessment or Knowledge Check (Chap. 4). To reiterate, no help of any kind should be given to students being assessed, not even rephrasing a problem. It is also advisable for students to have pencil and paper for assessments in ALEKS. A calculator is included in ALEKS when needed.

The ALEKS assessment is adaptive and variable in length. Consistency of effort and concentration may influence the length of an assessment.

NOTE. All students will be assessed on their first use of the system. This will provide you with a baseline picture of your class and of each individual student.

3.11 Report Tutorial

At the conclusion of the Initial Knowledge Check (Assessment), the student is given a brief tutorial on how to interpret the Assessment Report.

3.12 Beginning the Learning Mode

Students enter the Learning Mode by clicking on one of the topics they are **ready to learn**. If at all possible, the students should be given sufficient time in their first ALEKS session to use the Learning Mode and begin to **add concepts to their pie**. If they have this experience, their interest in using ALEKS will be more favorable. You should also be present to answer questions regarding the Learning Mode and to

help your students familiarize themselves with its varied features. This is particularly important for when they will have to use ALEKS unsupervised.

Chapter 4

Assessment Mode

The Assessment Mode is the heart of the ALEKS system. The program quickly and accurately determines a student’s knowledge, in order to deliver individualized instruction on the exact topics the student is ready to learn. In ALEKS, learning is powered and optimized by assessment. The terms “knowledge check” and “assessment” are synonymous and will be used interchangeably.

4.1 Assessments in ALEKS

The ALEKS assessment (knowledge check) uses open-ended problems (no multiple-choice questions). The assessment uses adaptive questioning, so that problem types are selected based on all the previous answers the student has given. It is impossible to predict which types of problems will appear, or in what order. Moreover, the problems themselves are generated algorithmically, with randomly-selected values (as is the case also in the Learning Mode). Consequently, students cannot “learn the assessment,” teachers are unable to “teach to the assessment,” and some types of cheating are impossible. In the unlikely event that two students sitting next to one another were given the same problem-type at the same time, the problem parameters and values would be different, and so would the correct answer. Certain assessments should be supervised, however, such as the first, interim, and final assessments in a class. Without supervision, students could use a textbook, receive systematic help, or have someone else take the assessment in their place. (There is no reason for a student who has begun using ALEKS to cheat on a “progress” assessment, as this will simply cause the system to suggest problems that are too difficult, and thus hinder the student’s own work.)

The student will be given an Initial Assessment immediately following completion of the ALEKS Tutorial (Sec. 3.10). The student is clearly informed that the assessment (knowledge check) is beginning. Next, a series of mathematical problems is posed to the student. The student provides the solution to each problem using the Answer Editor (or clicks **I don’t know**). In Assessment Mode, the system does not inform the student

whether their answer is correct or incorrect. The assessment continues until the system has determined the student's precise knowledge of the class materials, at which time the assessment ends and a report is presented to the student. The number of questions asked cannot be known in advance, although consistent effort and attention may contribute to shorter assessments.

Information on the reports available to students, including reports on knowledge checks (assessments), can be found in Appendix A.

4.2 Guidelines for Assessments

ALEKS assessments are an important part of the ALEKS program. It is essential that assessments be conducted according to certain guidelines. If there is an atmosphere permitting disturbances or distractions, students may not do their best. If assessment results are inaccurate, the system will give the student inappropriate problems and progress will initially be impaired. The system will recover and find the right level, but the student may still experience a degree of frustration. In order to avoid this, it is strongly recommended that the first assessment be taken under the instructor's supervision (Sec. 3.10).

All students being assessed need paper and pencil. A basic calculator is part of ALEKS, and will be available when appropriate. It is important that no assistance be given to the student. Explaining or rephrasing a problem should be avoided; this is considered inappropriate help. Students should be instructed to use the **I don't know** button only when they are completely unfamiliar with the topic. It is not possible to return to previous assessment questions. **Students should not click their browser's Back or Forward buttons when using ALEKS.**

4.3 How Assessments are Triggered

All ALEKS knowledge checks (assessments) work in much the same way, though they are triggered for different reasons, as explained in the following sections.

4.3.1 Initial Assessment

The Initial Assessment takes place at the outset of a student's use of ALEKS, immediately after Registration and the ALEKS Tutorial (Sec. 3.10). We strongly recommend that students take this Initial Assessment in a supervised computer lab setting, to ensure that they do not receive help or collaborate. In creating or editing a class account, the instructor can stipulate that the Initial Assessment be allowed only from school (Sec. 7.4.24).

4.3.2 Automatic Assessments

Additional assessments (knowledge checks) after the Initial Assessment are triggered automatically by the system based on the student's rate of progress and on the amount of time the student has spent working in ALEKS. ALEKS triggers the following automatic assessments:

Progress Assessment

when the student has mastered approximately 20 topics in the Learning Mode **and** spent at least 5 hours working in ALEKS since the last assessment.

Login Time Assessment

when the student has spent 10 hours working in the Learning Mode since the last assessment.

Periodic Assessment

when 60 days have passed since the last assessment.

Objective Completion Assessment

when the student completes the material of a textbook chapter or objective or reaches the assigned Mastery Level (Sec. 7.4.6).

Goal Completion Assessment

when the student has completed the final topic of the pie chart. If the assessment does not confirm the student's mastery of the class materials, the student will return to the Learning Mode. Consequently, more than one Goal Completion Assessment is possible, but ALEKS will not reassess the student if a only small number of topics need to be relearned.

These are all **Progress**-style assessments. Some modification of the parameters given above is possible; contact ALEKS Corporation Customer Support for assistance if you would like to adjust them.

Students can see when their next Knowledge Check is coming up by clicking on the Knowledge Check icon on their Home page, next to the Timeline/ALEKS Pie switch. When it is time for the Knowledge Check, they will see a notification, and they will have 24 hours to begin it (the exact period may be different if you set it differently for your class). Before beginning the Knowledge Check, the student should be encouraged to review by clicking on **Review for Knowledge Check**; this option appears under the Knowledge Check notification and on the student's Primary Guidance Menu.

Note that a Progress, Login Time, or Periodic Assessment (Knowledge Check) "resets the clock," so that assessments do not occur one on top of another. In general, ALEKS will avoid triggering unnecessary re-assessments.

Progress made by the student through the Learning Mode, or as the result of an assessment, periodically updates the list of available topics, displaying a new pie chart and new choices of concepts the student is "ready to learn." The automatic assessments

check the students' retention of recently learned material, and may also include topics the student is ready to learn.

NOTE. Automatic assessments may be postponed due to a scheduled assignment. This occurs when the assignment has the **Prevent automatic assessments** box checked (Sec. 7.5.6). Also, to avoid the over-assessment of students, all automatic assessments will be prevented for students with 10 or fewer items remaining in an Objective or in the 48 hours preceding the Objective end date.

For Objectives without end dates, automatic assessments will be prevented for students with 10 or fewer items remaining to complete the current Objective, regardless of the mastery levels set (Sec. 7.4.6).

4.3.3 Scheduled Assessments

To schedule an assessment for the entire class or for specific students, select a class, click on the Assignment tab, then again on **Assignments**, and then select Scheduled Assessment under **New Assignment**. For example, the instructor, department, or school may wish to have “interim” assessments under supervision to guarantee reliable results. They have the option of selecting the style of assessment as Progress or Comprehensive. Progress Assessments are slightly shorter and focus on the student's most recent learning history; Comprehensive Assessments are slightly longer and probe more deeply into the student's overall knowledge of the class content.

ALEKS allows the instructor to choose the availability of Scheduled Assessments by specifying a beginning and ending date and time and how students access that assessment when it becomes available. Also among the options for a Scheduled Assessment is one to prevent automatic assessments within a certain number of days prior to the Scheduled Assessment. Note that any assessment scheduled by the instructor “resets the clock” for automatic assessments, so that students will not be assessed too frequently.

For additional information about Scheduled Assessments, see Sec. 7.5.9.

4.3.4 Requested Assessments for a Single Student

As an instructor, you can also request an assessment for a single student. To do this, select the student, and then on the Assignments menu, select **Request Assessment**. When a Requested Assessment is triggered, the assessment will take place immediately the next time the student logs in (compared to the Scheduled Assessment, where the student is only prompted to take the assessment after the date or time specified by the instructor). Like the Scheduled Assessment, a Requested Assessment for a single student “resets the clock” for automatic assessments. The results of this assessment will not be included in the Gradebook.

The style of a Requested Assessment can also be set to Progress or Comprehensive. Progress Assessments are slightly shorter and focus on the student's most recent learning

history; Comprehensive Assessments are slightly longer and probe more deeply into the student's overall knowledge of the class content.

For additional information about Requested Assessments, see Sec. 7.8.9.

4.4 Answer Editor

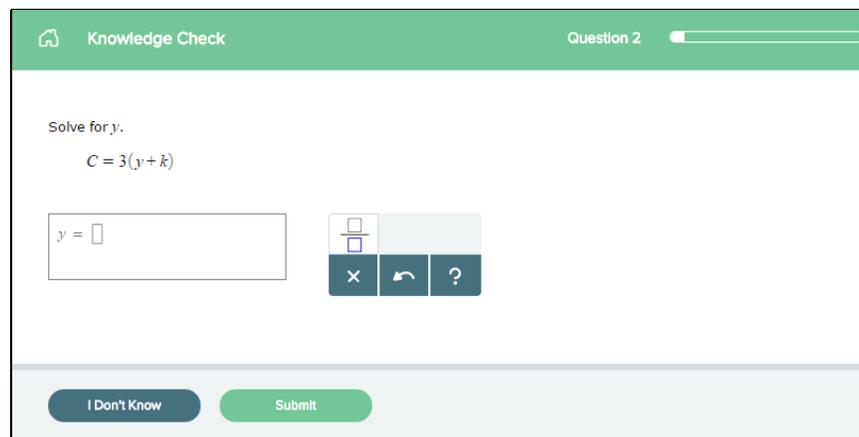


Figure 4.1: The Answer Editor for Mathematical Expressions (Assessment)

Input to the ALEKS system is always in the form of proper mathematical expressions and constructions, never multiple choice. A critical reason for this is to check students' knowledge accurately. Another purpose is to train students in the skills needed for conventional, paper-and-pencil communication of solutions and results. The sophistication of the ALEKS input tools provides additional advantages. The presentation of results is always neat and clear. The ALEKS graphing tools allow students to draw accurate graphs and geometrical constructions. Immediate feedback is provided on the formal completeness of solutions.

The general term for the input tools used in ALEKS is the **Answer Editor**. This encompasses a variety of actual modes for user input, including: an Answer Editor for mathematical expressions, an Answer Editor for the number line, and an Answer Editor for graphing in the Cartesian plane (with x and y coordinate axes). A student beginning to use ALEKS is trained in how to use the features of the Answer Editor that are relevant to the subject (Sec. 3.9). Also, context-sensitive help is available on use of Answer Editor through the ? icon next to the buttons on the tool palette.

In much of what follows, emphasis is on the **Answer Editor for mathematical expressions**, as this is the section which involves the greatest degree of interplay between mouse, keyboard, and on-screen buttons and icons.

4.5 Manipulators for Mathematical Expressions

The Answer Editor for mathematical expressions consists of two parts: a rectangular field where mathematical expressions are entered (the **entry field**) is to the left, and a **keypad** made of buttons with mathematical symbols is to the right (Fig. 4.1). Mathematical expressions are entered and edited using the buttons of the Answer Editor keypad, as well as the basic keyboard, the Left and Right arrow keys, the Tab, Enter, and Backspace keys, and the mouse.

NOTE. Buttons are displayed to correspond with the kind of problem being solved. The selection is made in such a way as to avoid giving a hint to the correct answer. Keyboard shortcuts (Fig. 4.2) work only when the corresponding button is displayed.

Expression	Answer Editor keypad button	Keyboard equivalent
Square Root	$\sqrt{\quad}$	(none)
Fraction	$\frac{\quad}{\quad}$	/
Mixed Number	$\frac{\quad}{\quad} \frac{\quad}{\quad}$	(none)
Repeating Decimal	$\overline{\quad}$	(none)
Absolute Value	$ \quad $	(none)
List of Expressions	\quad, \quad, \dots	,
Exponent	\quad^{\quad}	^ (before exponent)
Multiplication Expression	$\quad \times \quad$	*
Percentage	%	%
Greater-Than	$\quad > \quad$	>
Less-Than	$\quad < \quad$	<
Greater-Than-or-Equal-To	$\quad \geq \quad$	(none)
Less-Than-or-Equal-To	$\quad \leq \quad$	(none)
Equal-To	$\quad = \quad$	=
Not-Equal-To	$\quad \neq \quad$	(none)
AND	<i>AND</i>	(none)
OR	<i>OR</i>	(none)

Figure 4.2: Mathematical Expressions Produced by the Answer Editor

4.5.1 Basic Input

When a new page is opened and contains a problem whose solution is a mathematical expression, the entry field initially contains at least one blue box. Each blue box represents a mathematical expression forming part of the complete answer. To enter a mathematical expression the student must first click on a blue box. When this is done, the cursor (or “caret”) appears inside the box. The cursor marks the point at which something is entered. Material can be entered using the basic keyboard or the buttons

Key	Effect
Right arrow - Tab - Enter - Spacebar	moves the cursor one place to the right (ahead)
Left arrow	moves the cursor one place to the left (back)
Backspace	deletes input immediately preceding (to the left of) the cursor and moves the cursor one place to the left (back) OR deletes selected input

Figure 4.3: Using Special Keys in the Answer Editor

of the keypad. Individual digits can be entered only from the keyboard. Symbols can be entered using the buttons of the keypad or sometimes from the keyboard (Fig. 4.2).

4.5.2 Basic Editing Tools

The cursor, showing the point at which material is entered, can be moved using the Left and Right arrows, the Tab and Enter keys, as well as the Spacebar. It can also be positioned using the mouse. Input can be deleted using the Backspace key (Fig. 4.3).

4.5.3 Selecting Input

It is possible to select a continuous portion of input by dragging the pointer with the mouse button held down. A segment that has been selected by dragging in this way can be deleted by pressing Backspace, replaced by typing, or replaced by clicking the buttons of the Answer Editor keypad. It can also be inserted into a mathematical expression such as a fraction or a square root (the selected portion is placed in the numerator position or under the square root sign, respectively).

4.5.4 Clear and Undo

After material has been entered, the field can be returned to its empty state by clicking **Clear**. Clicking **Undo** cancels the most recent action. Clicking **Undo** a second time restores the effect of the canceled action (including a **Clear** command).

4.6 Mathematical Expressions

The purpose of the Answer Editor for mathematical expressions is to process user input in the form of correct mathematical expressions. One important way in which the Answer Editor guides the user in constructing such expressions is by means of the blue

boxes. If a blue box remains on the screen, you know that the input typed so far is not yet complete.

4.6.1 Entering Expressions from the Keyboard

For expressions that do not require the use of the Answer Editor keypad, the user can place the cursor within a blue box and enter the mathematical expression from the keyboard. For many expressions, however, the Answer Editor keypad must be used. Some types of expressions can be entered by either keypad or keyboard (Fig. 4.2).

4.6.2 Using the Answer Editor Keypad to Structure Simple Expressions

To form a simple mathematical expression, the user places the cursor in an empty blue box and clicks on the appropriate button from the Answer Editor keypad. The initial blue box disappears and new blue boxes may appear (depending on the button), accompanied by all of the necessary signs. The user can now fill in the new boxes.

4.6.3 Entering Complex Expressions

Sometimes it is necessary to enter more complex mathematical expressions, where multiple boxes are used. By placing the cursor in one of these boxes, an expression can be entered from the keyboard, or, by clicking on a button of the Answer Editor keypad, replace it with the structure of a new mathematical expression. Expressions of any degree of complexity can be created in this way.

NOTE. The Answer Editor does not supply parentheses automatically. The user must know when they are necessary. In particular, when there is an expression consisting of more than one symbol that must be raised to a power, the student may need to enclose it in parentheses, just as in writing; otherwise, only the final symbol (the one just before the exponent) will be raised to the given power.

4.6.4 Alternate Ways of Entering Expressions

The buttons of the Answer Editor keypad can be used in other ways as well. In particular, users can select some portion of the input in the entry field which constitutes a complete mathematical expression, and then click on a keypad button. This will create a new mathematical expression within which the expression selected is one component. The same basic rule applies: the minimum unit of manipulation is a complete mathematical expression.

4.6.5 Other Mathematical Signs

The following mathematical signs can be entered only from the keyboard:

- The plus sign (+).
- The minus sign (-), both for connecting the two parts of a subtraction expression and for designating a negative number.
- The period (.) used in decimals.
- The comma (,) used to punctuate numbers of more than three places.

4.6.6 The Asterisk for Multiplication

This is a special case. The “x” character on the keyboard cannot be used to enter a multiplication sign. Only the asterisk (*) serves this purpose. (The multiplication sign on the Answer Editor keypad, however, is the traditional x-shaped symbol.)

4.6.7 Mixed Numbers

This is another special case. Although fractions can be entered from the keyboard using the front slash character (/), mixed numbers **cannot** be entered this way. In other words, the Answer Editor does not automatically regard a whole number followed by a fraction as a mixed number. The mixed number button on the Answer Editor keypad **must** be used to enter mixed numbers.

4.7 Types of Mathematical Expressions

The following set of directions is intended to illustrate the variety of ways in which mathematical expressions can be entered using the Answer Editor.

Here, **Button** will always refer to a button on the Answer Editor keypad. By **select** we mean drag the mouse over the expression to be selected with the mouse button depressed.



Percentage

48%

Here you can use either the Answer Editor keypad or the regular keyboard to enter signs:

- Enter the expression you wish to express as a percentage and click on the percent button; **OR**
- Enter the expression you wish to express as a percentage and then enter the (keyboard) percent sign.

**Fraction**

$$\frac{7}{10}$$

Fractions can be entered in at least three ways:

- Enter the numerator, enter a (keyboard) forward slash character, and enter the denominator; **OR**
- Enter the numerator, click on the fraction button, and enter the denominator; **OR**
- Click on the fraction button, enter the numerator, then click on the blue square in the position of the denominator and enter the denominator. You can also advance the cursor to the position of the denominator using the keyboard.

**Mixed Number**

$$5\frac{7}{8}$$

Mixed numbers can be entered in more than one way, but each way requires use of the mixed number button:

- Enter the whole number part, click on the mixed number button, enter the numerator, press Enter, and enter the denominator; **OR**
- Click on the mixed number button, enter the whole number part, press the right arrow, enter the numerator, move the cursor to the denominator position, and enter the denominator (i.e., fill in the boxes).

**Repeating Decimal**

$$1.\overline{27}$$

- Enter all digits that precede the repeating pattern, including the decimal point (a period on the keyboard) and any decimal places preceding the pattern, click on the bar button, and enter the repeating pattern; **OR**
- Enter all digits, including the decimal point (a period on the keyboard) and all decimal positions following it, select the repeating pattern only, and click on the bar button.

**Fraction in square root followed by multiplier**

$$\sqrt{\frac{5}{8}} \times 3$$

For this example only one input method is given, but others could be suggested:

- Click on the square root sign button, click on the fraction button, enter the numerator, tab, enter the denominator, then tab, enter an asterisk (from the keyboard), and enter the multiplier.

**List**

$$1, 2, 3$$

For the purposes of the following example, assume that there is a list consisting of three components to be entered:

- Enter the first expression, click on the list button (or press the keyboard comma), enter the second expression, click on the list button, enter the third expression, click on the list button, and enter the fourth expression; **OR**
- Click on the list button (or press the keyboard comma) twice, click on the first blue box, enter the first expression, move the cursor right, enter the second expression, move the cursor right, and enter the third expression.

Answers with Units

10 cups

There are also some cases where the Answer Editor does part of the formatting. For example, in problems where answers must be expressed in some kind of units, such as dollars or meters, the unit expression needed may appear in advance.

**Square Root** $\sqrt{81}$

- Click on the square root button and enter the expression into the square root sign; **OR**
- Enter the expression you wish to appear under the square root sign, select it, and click on the square root button.

In the simple example just given the second method reverses the sequence of steps of the first method. Such complementary methods are typical.

**Absolute Value** $|-6|$

Another pair of complementary methods:

- Click on the absolute value button and enter the expression whose absolute value you wish to express; **OR**
- Enter the expression whose absolute value you wish to express, highlight the entire expression, and click on the absolute value button.

**Exponent** 3^2

- Enter the expression you wish to raise to a power, click on the exponent button, and enter the exponent; **OR**
- Click on the Exponent button, enter the base, then move the cursor to the exponent box and enter the exponent.

NOTE. If the number you wish to raise to a power is more complex, it may need to be enclosed in parentheses (Sec. 4.6.3).

**Square Root Preceded by Multiplier** $2\sqrt{6}$

With more complex expressions, you can use the mouse to place the cursor in the needed position, as in the second method:

- Enter the multiplier, click on the square root button, and enter the expression you wish to be under the square root sign; **OR**
- Click on the square root button, click to the left of the square root sign, enter the multiplier, tab (or press the right arrow, or press Enter, or press the Spacebar, or click on the blue box under the square root sign), and enter the expression you wish to be under the square root sign.

4.8 Advanced Mathematical Expressions

The following types of mathematical expressions occur in more advanced subjects.



To create a matrix, click on an icon corresponding to the dimensions desired (2×2 , 2×3 , *etc.*), then fill in the cells with appropriate values.



For topics involving set notation, there will appear icons for each of the special symbols required, such as curly braces, “belongs to,” “such that,” the real numbers, the integers, and so forth.

4.9 The Answer Editor for Graphing

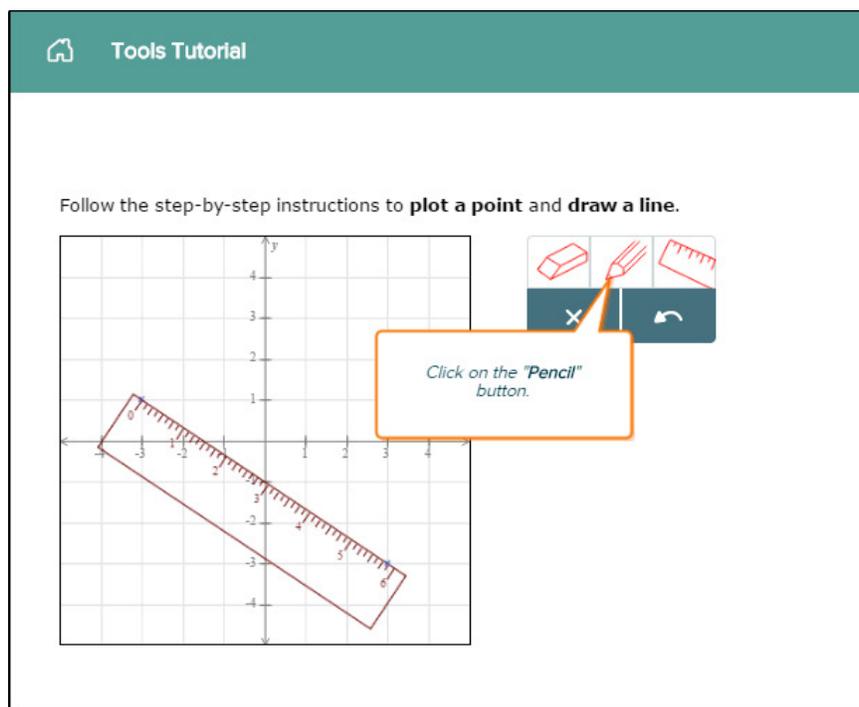


Figure 4.4: The Answer Editor for Graphing

The Answer Editor for graphing consists of a Cartesian plane with x - and y - coordinate axes and a selection of other tools for graphing lines and regions of the plane

(Fig. 4.4).



To graph a line, use the pencil tool to plot two points. Then, align the straightedge (ruler) on the two points (it is a “grabby” tool and will jump to a point when it is near it). Then use the pencil tool to draw the line. Note that the effect of the straightedge continues past its ends, so there is no need to move it to make a line

going from edge to edge of the depicted plane. The line should be started within the graph area, however.



To fill in a region, first, draw all the lines defining the region. Then use the region tool and click in the desired region of the plane. In order for one or more of the lines defining a region to be dotted (as in the graph of a system containing one or more strict inequalities), click on the line with the dotted line tool. This may be done before or after the region is filled.



To draw a graph, use the pencil tool to plot a point. Then, click on the Plot point button twice.



To plot a point where the coordinates are non-integers, use the Plot point button. Using the keyboard, type the numerical values into the coordinate boxes and click **Plot point**.



To draw a graph requiring an asymptote, use the asymptote tool (broken horizontal or vertical line) to place the asymptote as needed. A slanted asymptote may be placed by first drawing two points and then using the tool with a broken diagonal line. Plot the additional points needed for the graph, and then click on the graph button (curved line connecting “X”s).



For each type of conic section, there is a special tool allowing the construction of its graph. Normally, the user clicks once with the tool to establish the center or vertex of the graph, and then one or more additional times to determine its final form.



As with the number line, select the eraser tool and click on any part of a line, arc, or other component to remove it.

4.10 The Answer Editor for Histograms

The Answer Editor for histograms consists of a space for drawing histograms and icons (buttons) for creating and adjusting bars (Fig. 4.5).



Initially, the histogram appears with a small number of bars (e.g., two). The height of the bars is adjusted by clicking on the top edge of each and holding the mouse button down while dragging to the desired height. To add bars, click on the icon with the plus sign; to subtract bars, click on the icon with the minus sign. Each bar has a space beneath it where an appropriate label can be typed in.



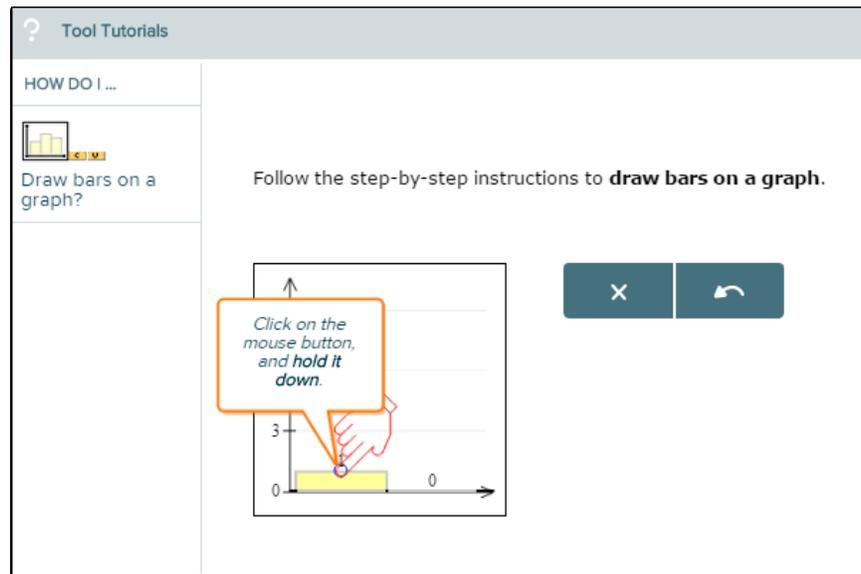


Figure 4.5: The Answer Editor for Histograms

Any bar may be set to any integer height by dragging. To set the height of a bar at a non-integer value, enter the value in the white area to the upper right of the histogram, then click on the icon with the broken horizontal line. This will place a broken line on the histogram at that height. Any bar may then be dragged to the height of any broken line that has been placed.

Chapter 5

Learning Mode

5.1 The ALEKS Learning Mode

The purpose of the Learning Mode is to assist students in mastering mathematical concepts. Students using ALEKS choose which concepts they wish to work on from the pool of available topics in the pie slices. This list of available topics is constantly being updated through progress made by the student in Learning Mode or as the result of an assessment. As students are only presented with material the system has determined they are most ready to learn, the benefit of their work is maximized.

In the Learning Mode students always work on one concept at a time. The Learning Mode provides students with a rich array of resources to help in mastering concepts. This includes explanations, references to a textbook if one has been integrated with ALEKS, links to supplemental tutorial material and interactive applications, practice problems, diagnostic feedback on problem solutions, and access to a student mathematical dictionary. Moreover, the Learning Mode is designed to monitor the progress made by students toward mastery of a given concept and advise them on continuing or changing concepts. A student is required to solve an appropriate number of practice problems correctly before the system will conclude that the concept has been mastered. (If the student makes mistakes, additional practice will be required.) Once the concept has been mastered, the student is encouraged to choose a new concept from the (updated) pie chart, but more practice is available if desired.

If the student has difficulty, the system may suggest that the student pay closer attention to the explanations. A new selection may also be encouraged. The student continues to work in the Learning Mode until a new assessment is triggered, either by the instructor or automatically. Automatic assessments are triggered when the student has either spent a certain amount of time in ALEKS or made a certain amount of progress since the last assessment (Sec. 4.3.2).

5.2 Interface Features

The features of the Learning Mode interface allow the student to edit personal information related to their account, view reports and gradebook information, and access helpful tools such as the ALEKS Dictionary, Calculator, and Review.

Students also have the ability to print certain screens in ALEKS. The **Print** feature will be available when the student generates a worksheet, views their reports, or utilizes the **Explain** page in Learning Mode. More detailed explanations of these options can be found below.

For a detailed description of the features of the student interface in ALEKS, please see Appendix A, the Student User Guide.

5.3 The Learning Mode Workflow

The ALEKS Learning Mode allows students to practice topics they are ready to learn. When students successfully solve a series of problems of the same type, ALEKS will add this problem type or “topic” to the student’s pie chart. If a student experiences difficulty with a topic, ALEKS will attempt to help the student in several ways. Students receive immediate feedback on their answers. Examples of how to solve the problems will be displayed on the “Explain” pages. The “Explain” pages link to definitions of terms and a comprehensive dictionary.

5.3.1 Practice Page



Figure 5.1: Practice Page

When a student chooses to begin work on a topic, ALEKS will display a page containing an instance of the problem, followed by the Answer Editor. This is where a solution to the problem can be attempted (Fig. 5.1). All practice problems are generated by algorithms, with randomly selected numerical values, so that the variety of problem instances for any topic is very high.

Below the Answer Editor are buttons labeled **Explanation** and **Check**. Clicking on **Check** has the same effect as described for the Assessment Mode: it submits the answer. Here, however, the user is given immediate feedback on their answer (Sec. 5.4). If correct, the student will receive a congratulatory message.

When the student clicks **Next**, a new problem is presented. In the case where the topic is considered mastered, the student will receive a congratulatory message and the system will offer to suggest new topics.

When the student enters an incorrect answer, ALEKS will return the presentation of the original problem with feedback on the student's error. Students can then click the **Explanation** button.

5.3.2 Explanation Page

The screenshot shows the ALEKS interface for the problem "Least common multiple of two monomials". The page is titled "ALGEBRA AND GEOMETRY REVIEW" and "Least common multiple of two monomials". The "QUESTION" section asks to find the least common multiple of $14y^7w^5$ and $3y^8w^5u^6$. The "EXPLANATION" section provides a step-by-step guide: 1. The LCM is the "smallest" multiple of the two expressions. 2. We start by finding the LCM of the coefficients 14 and 3, which is 42. 3. We then look at the variables that appear in at least one of the given expressions. The variables are y , w , and u . 4. The highest powers of these variables are y^8 , w^5 , and u^6 . 5. The LCM is the product of these highest powers and 42. The final LCM is $42y^8w^5u^6$. The "ANSWER" section shows the final result $42y^8w^5u^6$. On the right side of the explanation, there are icons for a calculator, a dictionary, a document, and a mail icon. There are also expandable sections for "More" and "Why look at highest powers?".

Figure 5.2: Explanation Page

The Explanation Page (Fig. 5.2) begins with the title of the current item and an instance of that item. The answer to the problem is given at the end of the explanation.

When ALEKS is used with textbook integration,

an icon will appear on the right of the Explanation page, linking to a reference or to an online textbook. Additional tutorial material and interactive applications may also be found through other icons at the right of the Explanation Page.

Certain parts of the Explanation may be expanded by clicking on a **More** icon. Here again, mathematical terms are linked to dictionary definitions. The system may suggest looking up certain key terms to help with the explanation (especially if the explanation has already been visited). At the bottom of the page is the **Start** button. Clicking on this button produces a new instance of the same problem-type. Sometimes there may also be a button for **Additional Explanation** or **Detailed Explanation**.

5.3.3 Wrong Answer Page

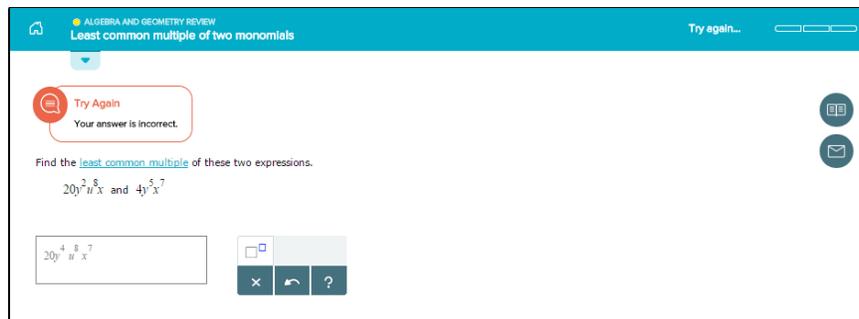


Figure 5.3: Wrong Answer Page

The Wrong Answer Page will appear only after an incorrect answer has been submitted on the practice page (Fig. 5.3). The system may explain why the answer is incorrect and offer advice on the error. Underlined words (hypertext links) may also appear on the screen for students to look up in the Dictionary.

The old, incorrect answer appears in the Answer Editor, where it can be corrected and resubmitted. Again, clicking on **Explanation** is an option that leads to an explanation of the problem. Please note that the system may also take the student directly to the “Explain” page if an item has been missed too many times.

5.4 Feedback in Learning Mode

In the Learning Mode, feedback is integrated into a sophisticated system of guidance for the student. Some errors prompt ALEKS to give specific hints and suggestions (Fig. 5.3). For example, it may say that a fractional answer needs to be reduced or that a list of expressions is incomplete. After a correct answer, the system will ask a limited number of questions for the same concept before judging that it has been mastered. If an item is missed too many times, however, a new topic will be suggested. If a concept has been left without mastery being attained, the system may suggest returning to it after one or two other topics have been covered.

5.5 Review

A student using ALEKS can review topics recently mastered in the Learning Mode or Assessment by selecting the **Review** filter in the topic carousel (Fig. 5.4). Clicking on any of these topics provides the chance for additional practice; this is particularly useful when the student knows that a new assessment (knowledge check) is imminent.

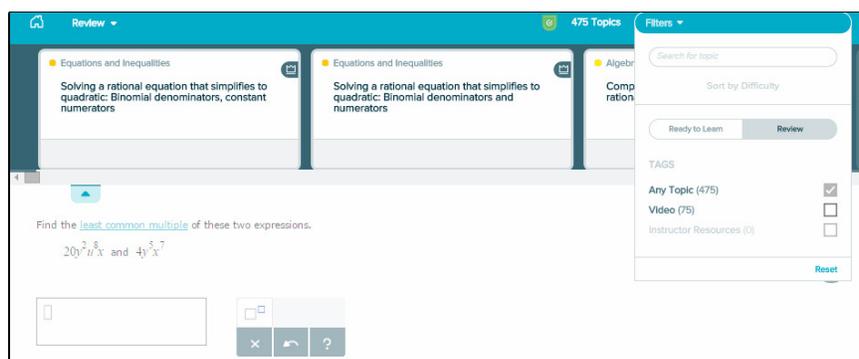


Figure 5.4: Review

NOTE. Work done in Review mode does not affect the student's pie chart or progress records.

5.6 Worksheet

Clicking the **Worksheet** button in the Main Navigation Menu (upper left) lets the student generate an individualized, printable homework sheet (in PDF format) containing a number of questions based on the student's most recent work in ALEKS (Fig. 5.5). When the student does this, a sheet containing answers for this individual worksheet (labeled with the student's name and the date) is sent to the instructor via the ALEKS message system (Sec. 7.2.2). The instructor may permit students access to their worksheet answers.

A record will be kept on the Worksheet page of all worksheets produced by the student. The student can click on the link for any past worksheet in order to obtain that worksheet again. If the instructor has permitted access to worksheet answers, there will also be links on this page to answer keys for each of the worksheets.

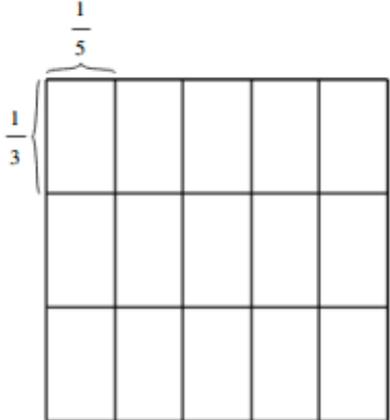
NOTE. In order to view or print documents in PDF format, such as the ALEKS worksheet, Adobe Acrobat or Adobe Acrobat Reader must be installed on your computer. Most computers have this software. If for any reason your computer does not, there is a link on the ALEKS Worksheet page to download it. Also, because the worksheet is opened in a new browser window, it may be necessary to disable your pop-up blocker temporarily in order to view or print the ALEKS worksheet.

ALEKS[®] Worksheet

Carly Palmer - Worksheet #1 - 06/25/2015 8:48 AM
Pre-Algebra / Period 2 (CPALMER508)

Review Questions

- Estimate $21,535 - 11,566$ by first rounding each number to the nearest thousand.
- Shade a region whose area is $\frac{2}{3} \times \frac{2}{5}$.
Then use the figure to compute $\frac{2}{3} \times \frac{2}{5}$.



The figure shows a 3x5 grid. A horizontal bracket above the first column is labeled $\frac{1}{5}$. A vertical bracket to the left of the first row is labeled $\frac{1}{3}$.

$$\frac{2}{3} \times \frac{2}{5} = \square$$

- Evaluate.
 $4 \cdot 4^2 \div 8$

Figure 5.5: Worksheet

Chapter 6

QuickTables

QuickTables is a special tool for mastery of Arithmetic facts (Addition, Subtraction, Multiplication, Division). It is available as part of some ALEKS course products and as an independent ALEKS course product. QuickTables uses individually configured, progressive, paced-response drills to develop mastery of the math facts, in a supportive, colorful interactive environment. Among many other features, it offers a series of games which the students “earn” through the progress that they make toward mastery of the various fact tables.

6.1 Setting Up QuickTables for your Class

In any ALEKS class where you choose to include QuickTables, you can select one or more of the following tables: Addition, Subtraction, Multiplication, and Division. The selection may be changed at any time; for example, you may start out with only Addition, then add Subtraction and the others one at a time as the students work their way through these tables.

Some ALEKS course products have QuickTables enabled by default, others not. Depending on the selected class, you will be prompted to add QuickTables at different times during the setup.

When creating a class in ALEKS, **if the class has QuickTables included by default**, you can add the QuickTables tables as part of the class creation process. **If the class does not have QuickTables included by default**, you will need to create and save the class before adding the QuickTables via the **Class Summary** (Sec. 7.4.15) and then **Set QuickTables** (Sec. 6.1.2).

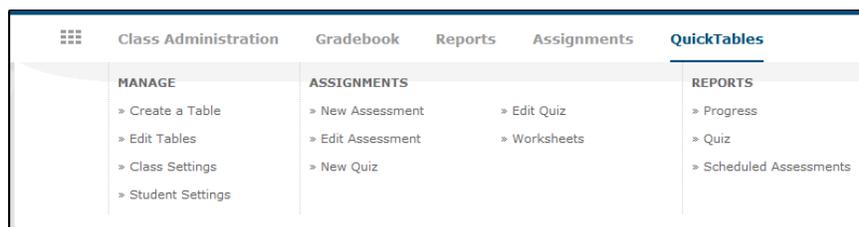


Figure 6.1: QuickTables Menu

6.1.1 QuickTables Sub-Navigation

From the **QuickTables** sub-navigation for the given class, instructors can add tables, modify existing tables, view or update the QuickTables settings, and view reports (Fig. 6.1).

The available options are:

- Create a Table (Sec. 6.1.2)
- Edit Tables (Sec. 6.1.3)
- QuickTables Class Settings (Sec. 6.1.4)
- QuickTables Game Settings (Sec. 6.1.5)
- QuickTables Retention Assessment Settings (Sec. 6.1.6)
- QuickTables Student Settings (Sec. 6.1.7)
- QuickTables Assignments (Sec. 6.2)
- QuickTables Reports (Sec. 6.3)

6.1.2 Create a Table

To create a table for the selected class, from the **QuickTables** sub-navigation, select **Create a table**.

On the **Create a new table** page (Fig. 6.2), you will need to:

1. Select the operation for the table (Addition, Subtraction, Multiplication, Division).
2. Select the range of numbers to be used.
3. Make the table available to all students in this class (the default) or only to selected students.
4. Click **Save & Activate Table**.

After you have clicked to confirm your choice, the table will be listed under **Tables Currently Active for this Class**. If you wish to make changes to the table(s), select **Edit tables** (Sec. 6.1.3).

Class Code: XXXXX-XXXXX CLASS TOOLS

Create a Table

Create a new table

To create a new table, select:

1. Operation: (Choose one) ▾
2. Range of numbers used
3. Assign to all students or to specific students

Save & Activate Table

Tables currently active for this class

Operation	Range of numbers	Students assigned to this table
Addition	0-12	26 of 26
Subtraction	0-12	18 of 26
Multiplication	0-12	13 of 26
Division	0-12	21 of 26

[Edit tables](#)

Figure 6.2: Create a Table

NOTE. A student’s QuickTables records move with the account, regardless of the class. In order for the records to appear, however, the new class needs to have the same QuickTables configuration as the original class.

6.1.3 Edit Tables

To edit a table, from the **QuickTables** sub-navigation, select **Edit Tables**.

On the **Edit Tables** page, instructors can do the following:

- Reassign Students to a table(s).
- Delete a table.
- Create a table.

6.1.4 QuickTables Class Settings

The QuickTables Class Settings affect all QuickTables use for the given class. After you gain some experience using QuickTables, you may decide to change some of the default settings (Fig. 6.3).

The available options are:

- The daily time limit for the entire QuickTables session (default 15 minutes).
- The maximum number of days QuickTables can be used each week (default 3 days).

Figure 6.3: QuickTables Class Settings

- The tutor character.
- The Game Settings (Sec. 6.1.5).
- The Retention Assessment Settings (Sec. 6.1.6).

Use of QuickTables should be limited to ensure that students also spend time working in the regular ALEKS class (if applicable). The benefits of using the type of drills that QuickTables provides are greatest when concentrated in relatively short and well-spaced sessions. These short “bursts” of activity help keep the students’ concentration sharp.

6.1.5 Game Settings

As an incentive and teaching tool, QuickTables offers several short games in which students practice the facts they have been learning.

To access the **Game Settings**, from the **QuickTables** sub-navigation, select **Class Settings**.

Minimum time to spend on a daily session before games are available

This is the minimum time students must spend in QuickTables before games become available. Please note that if this is set to a length of time greater than the daily time limit for QuickTables (first setting at the top of the QuickTables Course Settings screen), the student will never have access to the games.

Maximum number of games per daily session

As students progress in QuickTables, they are given access to a greater variety of games. You can limit the number of times a student can play the games in a daily QuickTables session (default 6).

Reset high score chart

The final option for the Game Settings, is to reset the “high score chart” at regular intervals. Playing QuickTables games, students earn numerical scores that are compared with the scores of other students in the class. The current “high score” is reset at the interval that you choose (default weekly), to establish a regular period of competition among students for added motivation.

6.1.6 Retention Assessment Settings

To access the the **Retention Assessment Settings**, from the **QuickTables** sub-navigation, select **Class Settings**.

Retention Assessments are given to students when they complete a table in QuickTables. Their goal is to assess the student’s long-term mastery of the table. QuickTables does not have Progress Assessments. By default, the number of Retention Assessments per table is two. Additionally, by default, the number of days between when a student completes a table and a Retention Assessment is 30 days. Both these settings can be adjusted, as can a location setting for the Retention Assessment. When a Retention Assessment is triggered, QuickTables will force the student to take it so that they are not able to work in any other table until the assessment is completed.

After a Retention Assessment, the system behaves as it would after an Initial Assessment: if the result of the Retention Assessment is 100%, ALEKS displays the congratulations screen. If not, the student can continue in the Learning Mode. The system will use the result of the Retention Assessment as a starting state for the Learning Mode. The student does NOT have to work in this table and can choose another available table.

NOTE. By default, ALEKS gives two Retention Assessments per table 30 days after completion, no matter the result of the previous assessment. (Even if the student scored 100% after the first Retention Assessment, the student will have another one 30 days later.) Selecting **None** means that there will be no Retention Assessment for the class. Please be aware that if this option was set to one or more, and a Retention Assessment has been triggered, it cannot be canceled. Switching the option to **None** will not cancel a Retention Assessment that has already started.

6.1.7 QuickTables Student Settings

To modify student settings, from the **QuickTables** sub-navigation, select **Student Settings**.

- **On-screen keypad** is a numeric keypad that appears and is controlled using the mouse. You can hide or show this keypad. It can be made available for students who have trouble using the keyboard.
- **On-screen timer** is the the display of the time elapsed for a problem. You can hide or show this timer.
- **Timer setting** is the time that the student is given to input a correct answer. For effective practice, this number should be as low as reasonable. The Timer setting, for an individual student, cannot be modified until the keyboard exercise is completed.

6.2 QuickTables Assignments

Like the regular ALEKS course products, instructors can create assignments for QuickTables such as assessments, quizzes, and worksheets for the class. QuickTables Assessments and Worksheets are individualized to each student's current progress. Instructors can also produce customized Worksheets on selected facts from the tables.

6.2.1 QuickTables Scheduled Assessments

In addition to automatic Retention Assessments, instructors can schedule new assessments for an individual student or for the entire class, to assess students on their most recent knowledge of any tables.

To schedule an assessment:

1. From the **QuickTables** sub-navigation, select **New Assessment**.
2. Complete the Basic Options and Advanced Options for the quiz and click on **Save & Continue**.
3. Click **Done** to confirm the information.

To edit an assessment:

1. From the **QuickTables** sub-navigation, select **Edit Assessment**.
2. Select the assessment you would like to edit.
3. On the screen that follows, make your changes or create extension. You can also cancel the assessment by clicking on **Cancel this Assessment**.
4. Click **Done** to confirm the information.

6.2.2 QuickTables Quiz

Instructors can create a QuickTables quiz for a single student or for the entire class.

To schedule a Quiz:

1. From the **QuickTables** sub-navigation, select **New Quiz**.
2. Choose the table operation and math fact range, and then click **Next**.
3. On the following page, click on a math fact to add it to the quiz and then click **Next >>**. (Please note that you will need to add a minimum of 10 math facts for each quiz.)
4. Complete the Basic Options and Advanced Options for the quiz and click on **Save & Continue**.
5. Click **Done** to confirm the information.

To edit a Quiz:

1. From the **QuickTables** sub-navigation, select **Edit Quiz**.
2. Select the quiz you would like to edit.
3. On the screen that follows, make your changes or create extension. You can also delete a quiz by clicking on **Delete this Quiz**.
4. Click **Done** to confirm the information.

NOTE. Students that joined the class after a QuickTables quiz was created will not be prompted to take the quiz.

6.2.3 QuickTables Worksheets

Instructors can provide additional practice offline by generating QuickTables worksheets for the students.

To access QuickTables worksheets, from the **QuickTables** sub-navigation, select **Worksheets**.

View/Create Worksheets for a Single Student

This option allows you to choose a table and automatically create a customized worksheet for a single student, or view all such worksheets created so far.

View/Create Worksheets for all Students

This option allows you to choose a table and automatically create a customized worksheet for each student based on the student's progress, or view all such worksheets created so far.

View/Create Selected Math Fact Worksheets

This option allows you to choose one or more tables and design your own worksheet by selecting facts from the tables, or view all such worksheets created so far.

6.3 Reporting your Students' Progress in QuickTables

Reports for QuickTables may be accessed via the **QuickTables** sub-navigation.

Three types of report are available in QuickTables:

- Progress
- Quiz
- Scheduled Assessments

6.3.1 QuickTables Progress Reports

Progress Reports - Class Report for All Tables Class Code: XXXXX-XXXXX CLASS TOOLS

View report for: All Tables Download Excel Spreadsheet

Student Name [?] (Login Student Id)	Table Type	Total Time	Last Login	Assessment Date	Assessment Name	Progress [?]
Cameron, Jane	Addition 0-12	2h 52m	06/18/14	05/20/14	QuickTables Scheduled Assessment 3	 44 + 42 %
	Subtraction 0-12	0m	N/A	N/A	QuickTables Initial Assessment	 N/A*
	Multiplication 0-12	1h 48m	06/18/14	06/12/14	QuickTables Scheduled Assessment 5	 63 + 7 %
	Division 0-12	0m	N/A	N/A	QuickTables Initial Assessment	 N/A*
Carter, Bart	Addition 0-12	1h 55m	06/18/14	05/20/14	QuickTables Scheduled Assessment 3	 13 + 22 %
	Subtraction 0-12	18m	04/28/14	04/22/14	QuickTables Initial Assessment	 26 + 4 %
	Multiplication 0-12	0m	N/A	N/A	QuickTables Initial Assessment	 N/A*
	Division 0-12	1h 37m	06/18/14	04/22/14	QuickTables Initial Assessment	 4 + 45 %

Display past data: Show all the assessments

Legend: Portion of the table completed in the Assessment (blue), Portion of the table completed in the Learning Mode (green), Portion of the table the student still needs to learn (yellow), The student has not been assessed on this table. (grey)

(*) The student does not currently have access to this table.

Figure 6.4: QuickTables Reporting

To view QuickTables Progress Reports:

1. From the **QuickTables** sub-navigation, select **Progress**.
2. Use the drop-down menu to select either **All Tables** or a specific table.

The Progress Report view for QuickTables shows, for each student (Fig. 6.4):

- The total time spent in QuickTables since completion of the typing tutorial.
- The last login date.
- The assessment date, which is the date the assessment was completed.
- The bar graph, which is a representation of the student's progress in QuickTables. The bar graph displays percent mastery of the table contents in blue for the most recent assessment, with an additional segment in green showing what was added since that assessment (blue plus green equals the student's total current mastery). A grey bar indicates that the student has not yet been assessed on the table.

To print the QuickTables progress report, use the ALEKS Print button to upper right; to download its contents in Excel format, use the **Download Excel Spreadsheet** link. To see separate bar graphs for all of your students' assessments, use the link beneath the report marked **Display Past Data**. The student data may be ordered by any of the green clickable column headings. To see more details such as the date the student completed the table, click on the percentage under the **Progress** column.

6.3.2 QuickTables Quiz Reports

To view QuickTables Quiz Reports:

1. From the **QuickTables** sub-navigation, select **Quiz**.
2. Use the drop-down menu to select a quiz.

The Quiz result view for QuickTables shows, for each student:

- The date the quiz was submitted.
- The timer setting, meaning how long the student has to answer each question.
- The total time spent in the quiz.
- The percentage score. (You can click on the link to the right of a student's score to see the results in greater detail.)
- The letter grade.

The student data may be ordered by any of the green clickable column headings. To download the results in Excel format, click the link below the chart.

6.3.3 QuickTables Scheduled Assessment Reports

To view QuickTables Scheduled Assessment Reports:

1. From the **QuickTables** sub-navigation, select **Scheduled Assessments**.
2. Use the drop-down menu to select a scheduled assessment title.

The QuickTables Scheduled Assessment report view shows, for each student:

- The date of the assessment.
- The time spend on the assessment.
- The results of the assessment.

Clicking on the percentage link to the right of a student's bar graph will display the results in greater detail. This view will display a table of the assessment results or learning, showing their level on each of the math facts.

Like other reports in QuickTables, the order of student data for scheduled assessment may be ordered by any of the green clickable column headings. The class data may be downloaded to an Excel format by clicking on the link below the chart.

6.4 How Your Students Use QuickTables

When students log in to an ALEKS class where QuickTables is enabled, they see the **QuickTables** option in the top bar menu. Clicking on this option will switch them into the QuickTables environment.

6.4.1 QuickTables Keyboard Exercise

The first time students enter QuickTables, they are given a brief training on how to enter numbers quickly. The goal of the initial keyboard exercise is to increase the students' typing speed and accuracy. The keyboard exercise is parallel to the Tutorial that students experience when using ALEKS for the first time, but focused exclusively on typing and entering numbers smoothly and promptly. Numbers can be "entered" by using the **Enter** key or the **Space Bar** on the keyboard.

6.4.2 QuickTables Testing Mode

Following the introductory training, students select an operation and then take a brief test to determine their current knowledge of the math facts in the particular table. (Where there is more than one table, a test will be taken for each new table.) This is parallel to the Initial Assessment taken in regular ALEKS. **This initial assessment test must be finished in one login session. Logging out before it is complete will require restarting the test.**

6.4.3 QuickTables Learning Mode

When the student completes the test, the color-keyed Learning Display is presented, showing their current knowledge of the table. The student is then able to choose how they will work toward complete mastery of the table facts (Fig. 6.5). This display has a function similar to that of the pie chart in regular ALEKS.

To choose a math fact to work on, the student clicks on the corresponding cell in the table. If the student simply presses **Enter** or the **Space Bar**, a fact will be chosen from those available. There is a brief introduction to the fact, and then a paced drill

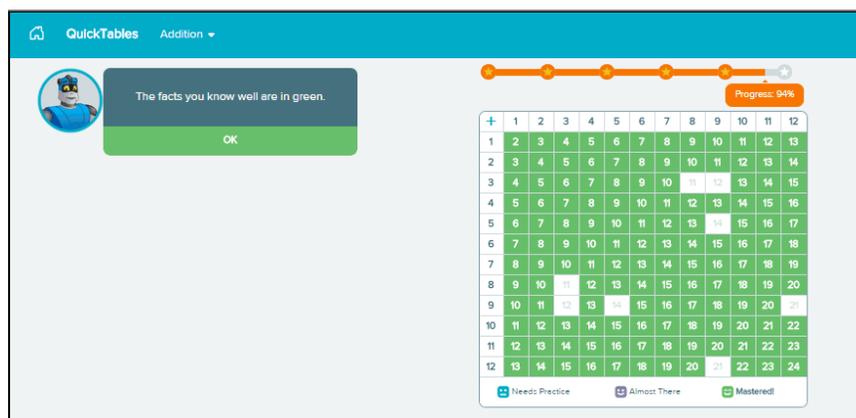


Figure 6.5: QuickTables Learning Display

sequence in which review of previously-learned facts is mixed in with reinforcement of the new fact. Sequences are kept short so that the student's concentration remains high. If there is a mistake, the drill is halted while the student reenters the correct answer, with help from QuickTables; also, if the student takes too long in answering, there is a similar halt while the student catches up with the drill. Once the student shows mastery of the new fact, there is a pause before the next cycle of learning.

Students can view a report of their work in QuickTables by clicking on **Options** located in the upper right of the screen. Clicking on **view your latest QuickTables report** link will display their QuickTables assessment results and QuickTables quiz results.

NOTE. The drill provided by QuickTables is paced, in the sense that students need to enter their answers within a specified “Target Time.” QuickTables seeks to develop quick, “automatic” response to questions on math facts. The actual time interval for answering is subject to customization (Sec. 6.1.7).

As the student progresses in mastery of new facts, the colors in the table flow across the report to show the changing area of mastery. This provides the student with direct, tangible evidence of progress, building the student's motivation. At the same time, the thermometer graphic to the right of the table also indicates the percentage of the table contents that the student has worked through. Gold stars next to the thermometer indicate levels of progress where new games become available to the student.

6.4.4 QuickTables Games

Students can click on the **Games** option in the top bar to take a break from drill and play any of the games that they have earned (Fig. 6.6), subject to the limits chosen by the instructor (Sec. 6.1.5). The games provided in QuickTables are designed to reinforce the students' knowledge of the math facts that they have just learned. The activation of games is based on progress made in a single table. If a student works in multiple

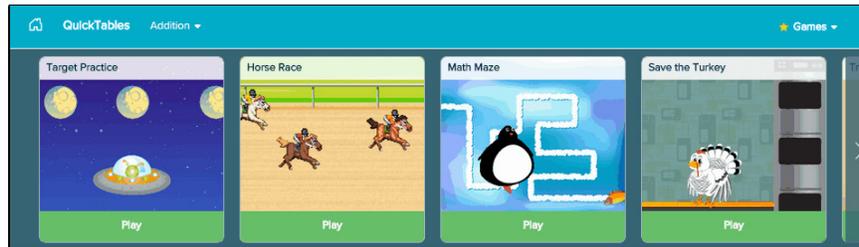


Figure 6.6: QuickTables Games

tables during a single session, the progress may not be enough in any one of them to cause a new game to appear.

NOTE. When students have spent the maximum daily amount of time allowed in QuickTables, they will receive a message, “You have used up all your QuickTables time today. Please come back another day.” The maximum daily amount of time is subject to customization (Sec. 6.1.4).

6.4.5 QuickTables Completion Certificate

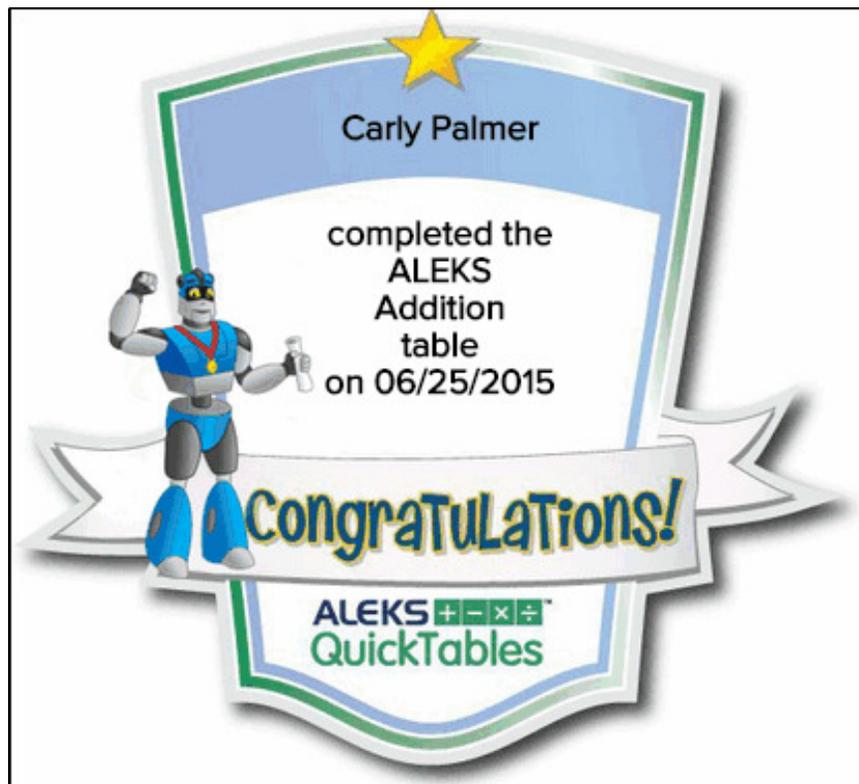


Figure 6.7: QuickTables Games

Students who complete a QuickTables table can print a certificate of completion by logging into their account, entering QuickTables, and pressing the tab of the mastered table. The certificate will appear, and a **Print** link will be available (Fig. 6.7).

Chapter 7

Instructor Module

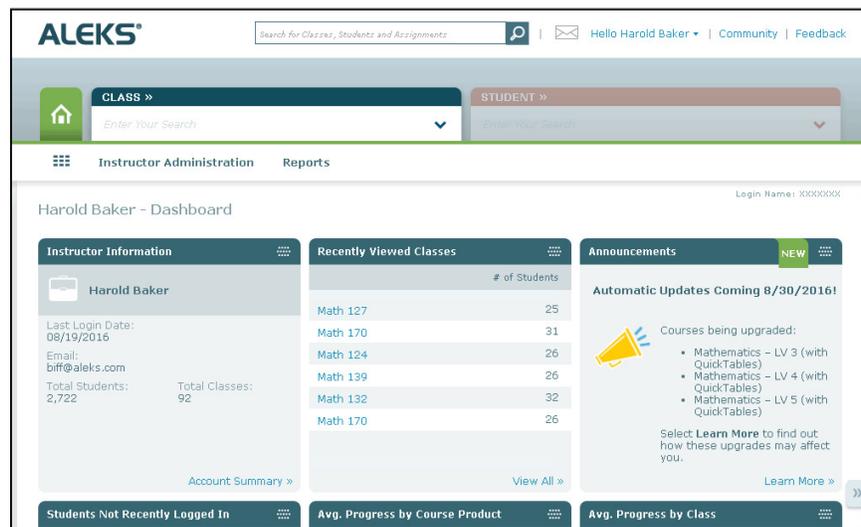


Figure 7.1: Account Home Screen

The ALEKS Instructor Module features a streamlined interface, based around a system of organizational levels and dynamic dashboard tiles. The Instructor Module makes class management simple, and allows instructors to spend less time with administrative tasks and more time directing student learning.

7.1 Navigation

There are several ways to navigate the Instructor Module. They include using the search box, main navigation, sub-navigation, or the dashboard. These navigation techniques are described below.

7.1.1 Search Box



Figure 7.2: Search Box

The **search box** can be found at the top of any page in the Instructor Module (Fig. 7.2). It can be used to search all pages in the Instructor Module with the exception of the ALEKS Community and the Class Forum. To search for a class, student, or assignment type in a search query and then select the **Enter** key. Alternatively, you can type in a search query and then click the search icon next to the **search box**.

7.1.2 Main Navigation



Figure 7.3: Main Navigation

Instructors have access to a two-level hierarchy: class and student (Fig. 7.3). The navigation structure is tab-driven for easy navigation and starts with the **CLASS** tab on the left. This tab contains all classes taught by the instructor.

Instructors begin by opening the drop-down menu and selecting a class, or by typing into the open box to bring up matches from the menu.

Once a class is selected, the **CLASS** tab becomes the active tab (current level in the hierarchy), and instructors have access to class-related menus and the class dashboard.

Instructors can remain at the class level or make a selection in the **STUDENT** tab to move down to that level. The **STUDENT** tab contains all the students enrolled in the selected class. As with the **CLASS** tab, selections can be made by clicking on a student's name or by typing in the search field to bring up a match. After selecting a student, instructors will have access to student-related menus and that specific student's dashboard.

7.1.3 Sub-Navigation

The sub-Navigation displays menus related to the selected item in the main navigation (class or student) (Fig. 7.4). To return to the tab level, click on the top of the appropriate tab to make it active again.



Figure 7.4: Sub-Navigation

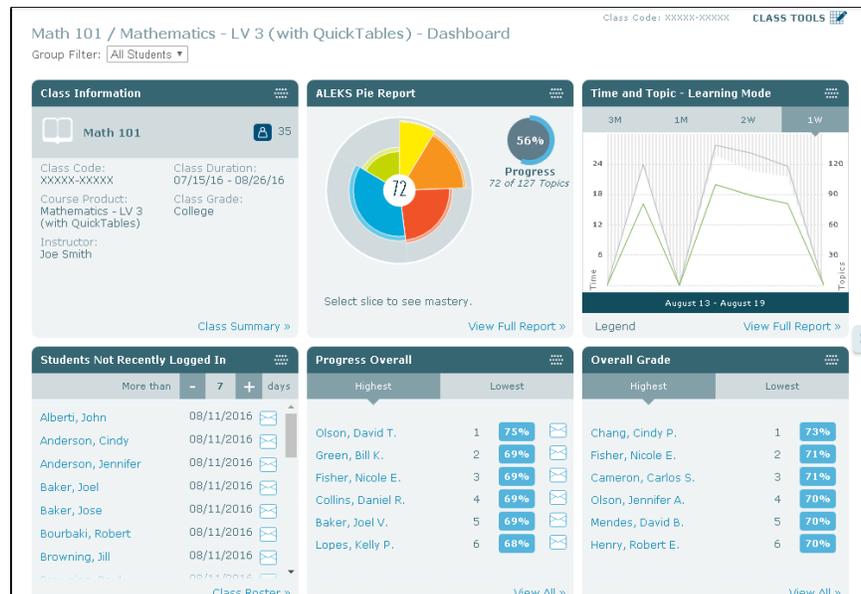


Figure 7.5: Dashboard

7.1.4 Dashboard

The Dashboard displays quick overviews of important data applicable to the level currently selected (Fig. 7.5). Each Dashboard consists of dynamic tiles that update when the Dashboard is opened. The Dashboard displays six tiles at a time; additional tiles can be found by clicking the navigational arrow button to the right or left of the Dashboard. The display order of the dashboard tiles can be changed by moving the tiles around on the screen.

To rearrange dashboard tiles on a tablet:

1. Press and hold your finger on the tablet screen over the title of the dashboard tile.
2. Drag the tile to the desired location.
3. Remove your finger from the screen to drop the tile in place. The rest of the tiles will automatically update their position relative to the moved tile.

To rearrange dashboard tiles on a computer or laptop:

1. Move the mouse over the title of the dashboard tile.
2. Click and hold. You will see the tile become slightly larger.
3. Move the tile to the desired location.
4. Unclick the mouse to drop the tile in place. The rest of the tiles will automatically update their position relative to the moved tile.

Many of the dashboard tiles are interactive. For example, moving the mouse around the pie chart on the **ALEKS Pie Mastery** dashboard tile will display the mastery levels for that particular slice. Additionally, many tiles will have links to other areas of the Instructor Module, including Reports, Class Summary, and the ALEKS Gradebook, to name a few.



You can return to the Dashboard for the level currently selected at any time by clicking the **Dashboard Button** to the left of the sub-navigation.

7.1.5 Home Button



The Home button, located to the left of the main navigation windows, can be used at any time to return to the home screen for the currently active account.

7.2 Instructor Account

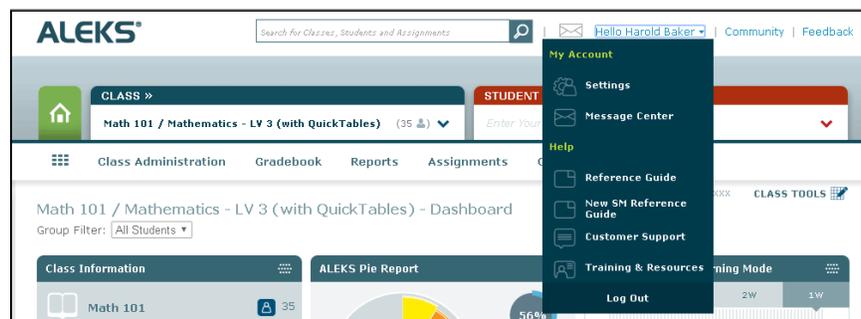


Figure 7.6: Account Drop-Down Menu

Account settings and helpful resources can be found in the Instructor account drop-down menu by clicking on your name in the upper right corner of the Instructor Module home page (Fig. 7.6). Details for each option are given below.

Prof. Ralph Ponderer - Account Summary

COMPLETE ✕
Your changes have been saved successfully.

Account Information / Edit

Basic Information
Account Type: **Instructor**

Title:

Salutation: **Prof.**

First Name: **Ralph**

Middle Name:

Last Name: **Ponderer**

Login Name: **RPOSTB**

[Reset Password](#)

ID:

Contact Information

Please complete this section. ✕

Email: **rponderer@gmail.com**

Phone Number:

Address:

Account Settings / Edit

Account Status: **Enabled**

Language: **English**

Automatic Logout: **30 min**

Permissions
Full student history

Classes

Current Classes

[Dev 1](#)

[Math 106](#)

Figure 7.7: Account Summary

7.2.1 Account Settings

The **Account Summary** page contains your account settings, contact information, and email preferences (Fig. 7.7). You can access this screen by selecting **Settings** from the account drop-down, or by clicking **Account Summary** under Instructor Administration on the main page

7.2.2 Message Center

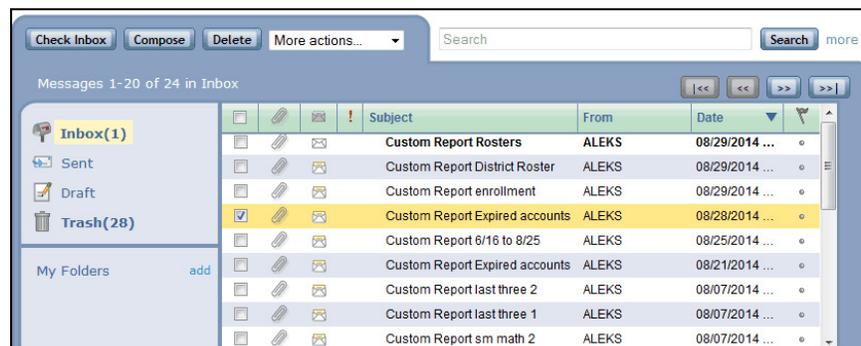


Figure 7.8: Message Center



The **ALEKS Message Center** is where messages can be sent from instructor to

student and to ALEKS Customer Support (Fig. 7.8). This is also where you will find messages sent to you by your students. The message center can be accessed by clicking on the envelope icon next to the search box, or by selecting Message Center from the instructor account drop-down menu.

The Message Center resembles an email program in most of its features, although the exchange of messages takes place within the ALEKS system. Also, the Message Center is equipped with special symbols and tools appropriate to communication about subject matter used in ALEKS.

The Message Center contains a full range of tools for using mathematical symbolism, constructions, and expressions in your messages. The tools are like those used in ALEKS itself in the Answer Editor. Moreover, students sending you messages in the Message Center can attach a graphic representation of the problem they are currently working on, to facilitate discussion of mathematical questions.

Compose To compose a new message, click on the **Compose** button. After clicking on the appropriate “To:,” “Cc:,” or “Bcc:” button, use the expandable folder list to select the recipient(s) of the message. As with traditional email programs, messages can be saved as drafts for later editing, they can be marked as urgent, and attachments can be included (up to 2 MB in size).

Check Inbox To check for new messages received while the ALEKS Message Center is open, you can click on the **Check Inbox** button to refresh the inbox.

7.2.3 Reference Guides

The following online documents are accessible directly from the ALEKS instructor and administrator account drop-down menu:

- **Reference Guide** is a summary of features of the Instructor Module.
- **Quick Start Guide** outlines the most important features and functions within ALEKS so instructors can easily begin working in ALEKS.
- **New SM Reference Guide** provides an overview of the new Student Module and its features.

7.2.4 Customer Support

Clicking on **Customer Support** in the instructor or administrator account drop-down menu opens an ALEKS customer support form.

7.2.5 Training & Resources

Training & Resources in the instructor or administrator account drop-down menu opens a window to the Training and Resources section on the ALEKS website. You can schedule a training session with an ALEKS specialist, register for an upcoming ALEKS overview session, and view On-demand videos of popular ALEKS features and tasks.

7.2.6 Log Out

To end your ALEKS session, select **Log Out** from the account drop-down, or simply close your browser window.

7.2.7 Community

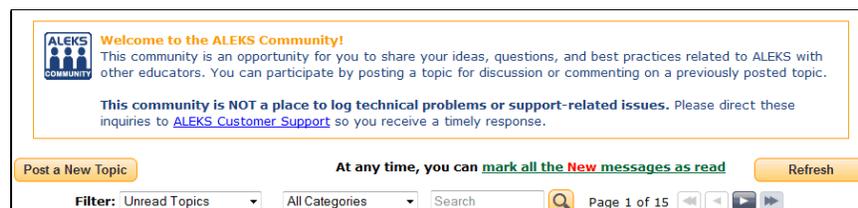


Figure 7.9: ALEKS Community

The **ALEKS Community** is an online community where instructors can share ideas and discuss best practices with ALEKS colleagues (Fig. 7.9). All ALEKS educators are members of the ALEKS Community and can post new topics or comment on existing discussions.

7.2.8 Feedback

Feedback allows you to send feedback to ALEKS regarding the Instructor Module.

7.2.9 Student Roster (Instructor Level)

From the **Instructor Administration**, instructors can access the ALEKS Student Roster for all students that are registered in classes under their account (Fig. 7.10).

Instructors can use the following filters to display various groups of students:

Active

All students currently in the class are tagged as active and displayed by default.

Harold Baker - Student Roster

0 Students Selected | Last updated: 08/19/2016 (10:51 AM) | Refresh | Displaying 200 students

Course Product: All (2598) | Active (2598) | Former (0) | Hidden (0) | Old Classes (401) | Download

Please select one or more rows to perform an action.

<input type="checkbox"/>	Name	Mastery	Course Product	Class	Login	Password	Enrolled	Expires	Last Login
<input type="checkbox"/>	Alberti, Bart	50%	Middle School Math Course 2	Math 117	BALBERTI1	APRILBENCH	04/10/16	04/10/17	08/11/16 03:04 PM
<input type="checkbox"/>	Alberti, Carlos	49%	High School Geometry	Math 134	CALBERTI14	APRILBENCH	04/12/16	04/12/17	08/11/16 12:23 PM
<input type="checkbox"/>	Alberti, Carlos	34%	High School Prep for Statistics	Math 166	CALBERTI18	APRILBENCH	07/15/16	07/15/17	08/11/16 06:42 PM
<input type="checkbox"/>	Alberti, Cindy	59%	CA Algebra 1	Math 131	CALBERTI1	APRILBENCH	04/28/16	04/28/17	08/11/16 05:11 PM
<input type="checkbox"/>	Alberti, Daniel	75%	Algebra Readiness Math	Math 122	DALBERTI10	APRILBENCH	05/08/16	05/08/17	08/11/16 03:53 PM

Figure 7.10: Student Roster (Instructor Level)

Former

Students are tagged with this status when they were in this class and have moved out of the class into another class, but their records still appear in this class.

Hidden

These students are hidden from reports and drop-down menus.

Old Classes (available only at Instructor level)

Students who were in a class that is inactive or archived.

The default roster settings will display information for Active students. Instructors can use the Class Roster to view students information in a selected class (Sec. 7.4.36). ALEKS administrators have access to the institution Student Roster to view all students registered at the school (Sec. 7.9.11).

7.3 Reports

The Report menu displays the ALEKS reports that are available for the current class. Each report is represented by an icon (Fig. 7.11). Instructors can access the Reports by selecting a class and clicking on the desired report in the **Reports** menu.

7.3.1 Available Reports

ALEKS offers a wide range of dynamic, automated reports that display individual student and class data. Instructors can use these reports to track usage, progress, grading, and attendance. The reports are organized by the following report types:

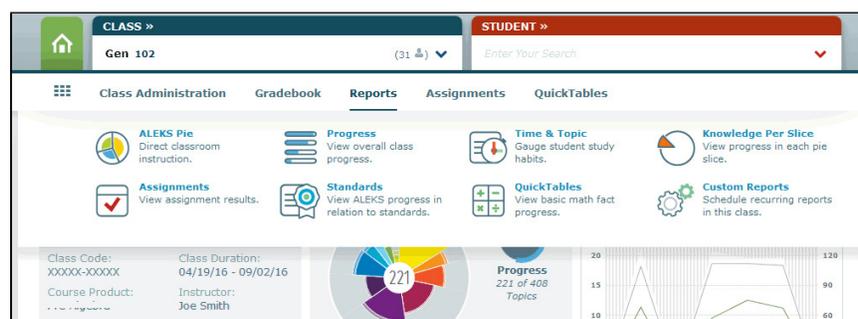


Figure 7.11: Reporting

- ALEKS Pie (Sec. 7.3.6)
- Progress (Sec. 7.3.12)
- Time and Topic (Sec. 7.3.19)
- Knowledge Per Slice (Sec. 7.3.22)
- Assignments (Sec. 7.3.23)
- State Standards (Sec. 7.3.26)
- QuickTables (Sec. 7.3.28)
- Custom Reports (Sec. 7.3.29)

NOTE. The report icons will not appear on the Reports menu when they are not applicable to the class.

To run a class report, select the **Class** from the dropdown list. To run an individual student report after selecting a **Class**, select a student, then select the desired report from the Reports menu.

7.3.2 Download Report Data

Reporting data can be printed or downloaded from any of the report styles. Use the printing options in your browser. To download a report, use the link marked **Download Excel Spreadsheet** on the upper right side of the report. Or, locate **Download**, click on the down arrow, and then select **XLS**.

7.3.3 Send Message to Selected Students

Instructors can send messages to selected students from within most class reports, the class roster, and the Gradebook as follows:

- To select specific students, click on the numbered icon or checkbox next to students' names. The icons will change from grey to yellow, while the checkbox will contain a mark. Re-clicking on the icon or checkbox will deselect the student.

- By clicking on **All** or the checkbox next to **Name**, instructors can select all students in the list.
- Clicking on the **Send Message to Selected Students** link or **Send Msg** icon opens a message in the ALEKS Inbox. The students' names will be pre-filled in the "Bcc" field of the email message (thus recipients of a group message do not know who the other recipients are).

7.3.4 Viewing Student History Across Multiple ALEKS classes

This feature allows administrators and instructors to view student history across multiple ALEKS classes. The comprehensive view can be used to identify each student's progress history and preserve a record of their work after they have been moved to a new ALEKS class. This feature can be found in the following reports:

- ALEKS Pie Report for a Single Student (Progress Monitoring) (Sec. 7.3.10)
- Progress Report for the Class (Detailed Progress History) (Sec. 7.3.17)
- Progress Report for a Single Student (Sec. 7.3.18)

NOTE. Depending on the options selected by the administrator at the school, instructors are able to see report history only for the classes they have taught or for all classes taken by the student (Sec. 7.9.1). Administrators can see all report history for all students. This feature will display student history from August 1, 2012 through the present; performance prior to this date may appear as a grey bar.

7.3.5 Interpreting Bar Graphs

Bar graphs appear in several of the ALEKS report styles. Although the meanings of the bar graphs vary by report style, there are some common features.

Bar Graph Colors

The colors used to fill the bar indicate the level of mastery of the class contents at a particular time. The bar is filled from left to right.

Blue

Means that mastery was shown on a knowledge check.

Light Blue

Means that tentative mastery was achieved in Learning Mode.

Grey

Indicates the part of the course material not mastered.

Blank (white)

Indicates a knowledge check is in progress.

Aquamarine

Shows progress made between the first and latest knowledge check.

Asterisk

Appearing by a greyed-out bar graph or any other color indicates, in some reports, that a new knowledge check is underway.

Values underneath Bar Graphs

Underneath the bar are percentages corresponding to the like-colored portion of the bar graph; for example, a “25%” in blue under the bar graph indicates that the blue portion of the bar is 25% of its total length. You can also view student progress by the number of topics. Simply click on the **Percent** or **Topics** link in the Course Progress column to toggle between the two views.

Multiple Bar Graphs

Where there is more than one bar graph per student, the bar graphs represent different points in the student’s learning history associated with knowledge checks taken by the student. Bar graphs showing a segment of the student’s learning history are stacked, with the earliest on the bottom and the most recent at the top.

More Features

There are several ways of accessing student data using reports:

- The list of students in a bar-graph report can be sorted on any of the report columns by clicking on the text in the header for that column. Clicking on the text in the header section of the column will bring up an ascending or descending arrow, used to sort the column.
- You can also navigate to other kinds of reports by clicking on hyperlinked names or dates. Clicking on a student’s name takes you to the detailed learning history for that student (Sec. 7.3.18).
- Clicking on the date for a knowledge check takes you to a detailed (pie chart) report for that knowledge check (Sec. 7.3.8).

NOTE. On some reports, if students have previously been in a different class, it is possible to toggle between viewing their total time in ALEKS and their total time in the current class. This toggle will appear below the report. For students who have only been in one ALEKS class, the displayed time will be the total time in the current class.

7.3.6 ALEKS Pie

The class report shows the average learning for the class and a detailed view of topic mastery (Fig. 7.12).

This report only includes results for students who have completed at least an Initial Knowledge Check. The ALEKS Pie Mastery for all students in the class and the number of topics completed are initially displayed in the top right.

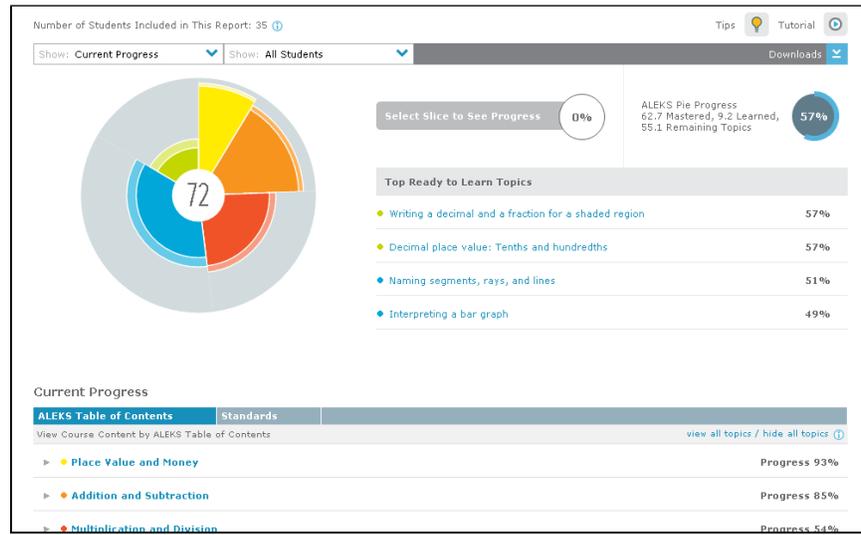


Figure 7.12: ALEKS Pie

Instructors can use this report to determine where students are in the class, specifically, what topics they have mastered, have not mastered, are ready to learn, have lost in knowledge check, or have attempted but not mastered (Fig. 7.13). This information can be used to plan classroom instruction, group students based on their knowledge and level of readiness, and communicate directly with these groups.

7.3.7 Display Options for ALEKS Pie Report

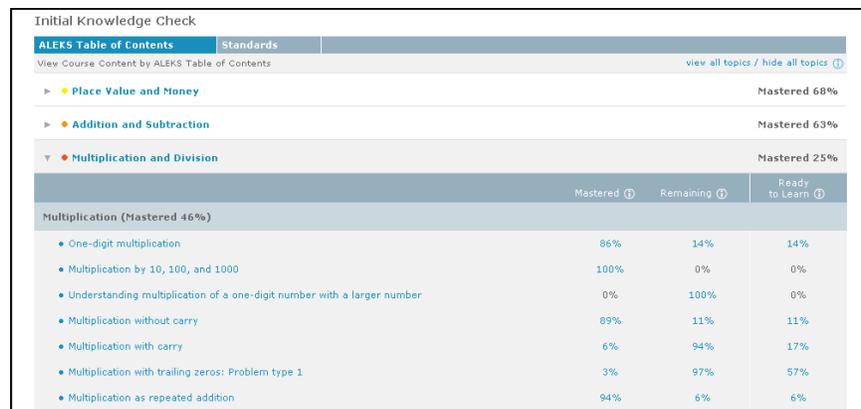


Figure 7.13: Student Mastery

Instructors can use the **Show** drop-down menu to filter the report by **Current Progress**, **Most Recent Knowledge Check**, or **Initial Knowledge Check**.

- In the **Current Progress** view, the main Ready to Learn Topics for the entire pie are listed to the right of the pie.
- In the **Most Recent Knowledge Check** view, the main Topics Lost in Recent Knowledge Check for the entire pie are listed. This shows data based on the most recent knowledge check results.
- In the **Initial Knowledge Check** view, the main Topics Mastered in Initial Knowledge Check for the entire pie are listed.

These views of student results may be filtered by slice, by selecting a slice from the pie. Clicking on a pie slice will make that slice “sticky,” so that the topics for this slice are displayed and do not change. The average class mastery for this slice is also displayed. Hovering over a slice with the mouse will display the name of that slice.

Topics with the highest numbers of students **Ready To Learn** are the ones most ready for classroom presentation. Trying to teach topics with low numbers in this display is more likely to produce boredom and frustration, because most students either have learned the topics already or are not yet ready to learn them.

Below the pie the results are broken down further by ALEKS Table of Contents (slice), objectives (when in use), or by any applicable standards. These sections can be broken down further, and instances of problems may be seen by clicking on individual topic links. A new instance of the problem type will be generated each time you click on the topic link.

The columns in this report have different meanings, depending on the current view:

Under **Current Progress**, you see:

Mastered

These are topics added to the pie after knowledge check in learning mode.

Remaining

These are topics the students have not shown mastery of, whether they have attempted them or not.

Ready to Learn

This is a subset of the not mastered category, and are the topics the students are ready to learn now.

Attempted, not mastered

This is a subset of the Remaining category, and are the topics the students have attempted but not mastered.

Under **Most Recent Knowledge Check**, you see:

Mastered

These are the topics known based on the most recent knowledge check.

Remaining

These are the topics the students do not know, based on the most recent knowledge check.

Ready to Learn

This is a subset of the not mastered category, and are the topics the students are ready to learn now, based on the most recent knowledge check.

Lost in Recent Knowledge Check

These are topics the students knew at one point but have lost, because the most recent knowledge check determined that the students did not know the topic anymore.

Under **Initial Knowledge Check**, you see:

Mastered

These are the topics known based on the Initial Knowledge Check.

Remaining

These are the topics the students do not know, based on the Initial Knowledge Check.

Ready to Learn

This is what the students are ready to learn now, based on the Initial Knowledge Check.

Other features:

- If you click on the percent link for a topic, you will see a breakdown of student mastery of that topic.
- You can send messages to students directly from this report.
- You can view additional topics that a group of students is ready to learn.
- The objectives tab (when present), will contain prerequisite topics if the TREC tool added items to the class (Sec. 7.4.9).

Excel downloads. Students who have not taken an Initial Knowledge Check will not be shown in this report, but they will be shown in the Excel spreadsheets. Spreadsheets available to download include the following: Pie View, Pie and Slice View, Topic Summary by Slice, Objective View, and Topic Summary by Objective. Please note that the latter two spreadsheets are only available if objectives are set up in the class.

7.3.8 ALEKS Pie Report for a Single Student

This report displays a pie chart for a single student, which by default will represent the most recent period of Knowledge Check and Learning (Fig. 7.14). Reports for other

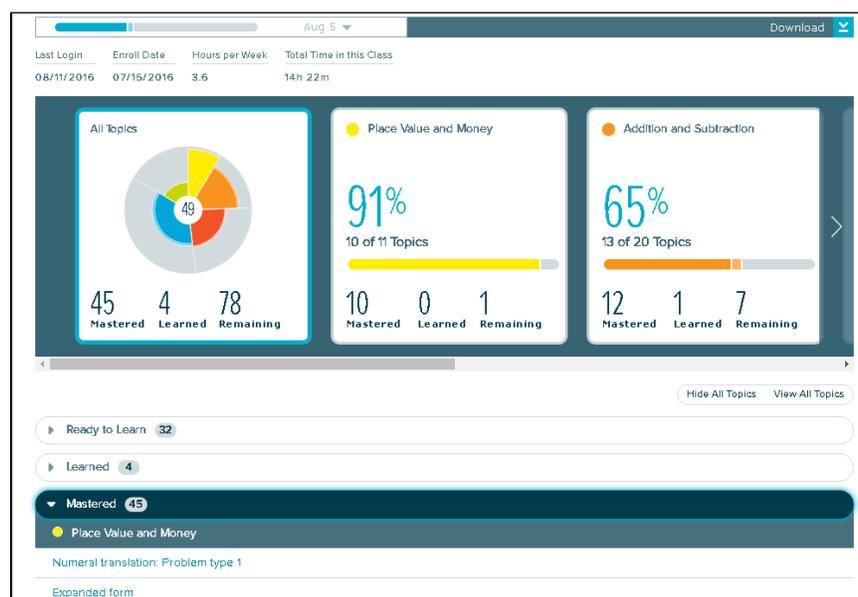


Figure 7.14: ALEKS Pie Report for a Single Student

periods may be chosen by selecting dates from the drop-down menu at the top of the page. The report will show the results of the most recent Knowledge Check, along with any progress made in Learning subsequent to that Knowledge Check.

The shading on the pie chart indicates the level of the student's mastery in each area: the shaded portion represents what the student has mastered, and the unshaded portion represents what the student has yet to learn. To the right of the pie chart are tiles for each individual pie slice, showing a breakdown of what material the student has mastered, learned, and has left to learn. To see a complete list of the topics in each category, click on the **View All Topics** toggle below the tiles. The list will update based on which tile the user has selected. Click on a topic to generate a unique instance of the problem and an explanation of the instance. These sample problems can be printed for use in the student's portfolio.

In addition to representing the student's individual learning path through the class, the information in this report can be used to create and maintain comprehensive Individualized Education Plans (IEPs) and guide effective one-on-one instruction. See the next section for details of how to use the condensed format of this report to view key student data and how to print copies of the report for inclusion in student portfolios.

7.3.9 Supporting Individualized Education Plans (IEPs)

The **ALEKS Pie Report** for a single student provides progress data for an individual student and serves as support for an Individual Education Plan (IEP). The tools



Figure 7.15: Supporting Individualized Education Plans

included in this report to support IEPs are the following (Fig. 7.15):

Standards

Instructors can quickly determine how a student is progressing relative to the State or Common Core State Standards. Click on the **Standards Report** link; a new window will open with a detailed breakdown of the student's progress against the standards. Expand the **Details** section for any Standard to see which topics the student has mastered and not mastered; of the topics not mastered, topics that the student is ready to learn are highlighted in yellow with the notation **(RL)**.

Ready to Learn next

Expand this section to see topics the student is ready to learn next. Instructors can use the student's list of topics ready to learn, as well as what the student has attempted but not mastered, to optimize one-on-one instruction.

What the student can do (Present Levels of Performance)

Expand this section to see topics the student has mastered up to a certain date; the time frame can be changed by selecting a different end-point from the drop-down menu at the top of the report.

7.3.10 Progress Monitoring

This section includes three components that provide a detailed overview of the student's progress in ALEKS (Fig. 7.16).

Time and Topic

This section dynamically tracks the student's daily learning progress and time spent in the program. Click on the link to open a new window with a detailed Time and Topic Report for this student. Instructors can use this report to determine whether the student is making adequate progress for the time they are spending

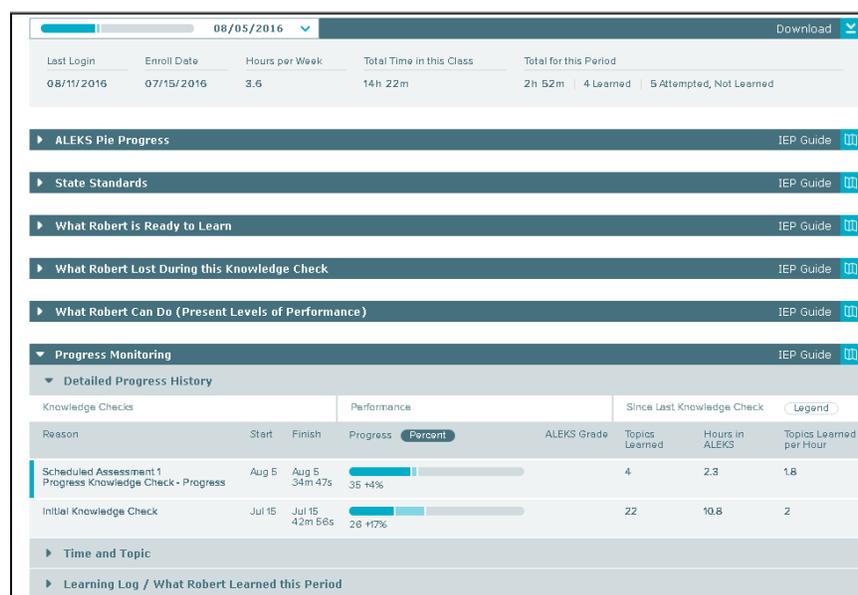


Figure 7.16: Progress Monitoring

in ALEKS and exactly which topics they have attempted, but not yet mastered. To see the student's Learning Sequence Log for a certain date, click on the date link. Here, the time and result of the student's work on each topic can be seen. By clicking on the **Result** link (Wrong, Correct, or Added to Pie), it is possible to see the specific problem the student worked on, along with their answer and the solution. Instructors can also use this report to ensure that students are meeting their weekly time requirement for ALEKS (Sec. 7.3.21).

Detailed Progress History

This section contains the student's progress for the current class. The knowledge check currently being viewed is indicated with an orange dot (Fig. 7.16). To view the student's progress in other classes, the instructor can click on the **View** link under **Previous Results** (if applicable). Student progress history can also be viewed on a student's pie report by clicking on any knowledge check date link from a current or previous class (Sec. 7.3.4).

Learning Log/Recent Student Learning (Learning Reports only)

This section highlights what the student has recently worked on in Learning Mode. Instructors can use this information to review topics the student has recently learned.

7.3.11 Objective Report

The Objective Report is a scrollable list of tiles for each objective in the course (Fig. 7.17). Each tile summarizes the student's progress for a particular objective at the time the



Figure 7.17: Objective Report

report is generated. The tiles display the due date of the objective (future objectives) or the date the student completed the objective (past objectives), the score achieved, the number of items making up the objective, and the number of goal topics remaining. Beneath the tiles are expandable lists of topics, broken down by category: Ready to Learn, Learned, Mastered, and Locked. (“Locked” topics are those for which the student has prerequisite topics left to complete.) To see a full list of topics, click on the **View All Topics** toggle. Double-click on a topic to see a sample question and corresponding explanation.

7.3.12 Progress Reports

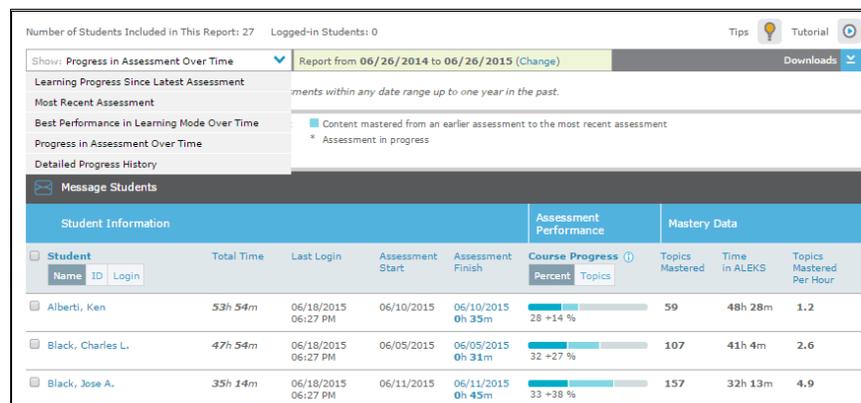


Figure 7.18: Progress Reports



Using the Progress Reports, instructors can view student progress on knowledge checks and in Learning Mode at various time intervals (Fig. 7.18). These reports allow instructors to track student progress and ensure students can get intervention when they need it the most. Instructors can change the report view by making a selection in the **Show** drop-down menu. A description of the report selected will be displayed below the drop-down menu.

In class-level Progress reports, clicking on a student's name will take the instructor to the individual progress report for the student (Sec. 7.3.18). Clicking on an knowledge check date link will take the instructor to the individual student's pie report, displaying the student's progress at that point in time (Sec. 7.3.8).

NOTE. If you navigate away from a Progress report and return at a later time, the report that was last selected will remain in effect.

7.3.13 Learning Progress Since Latest Knowledge Check

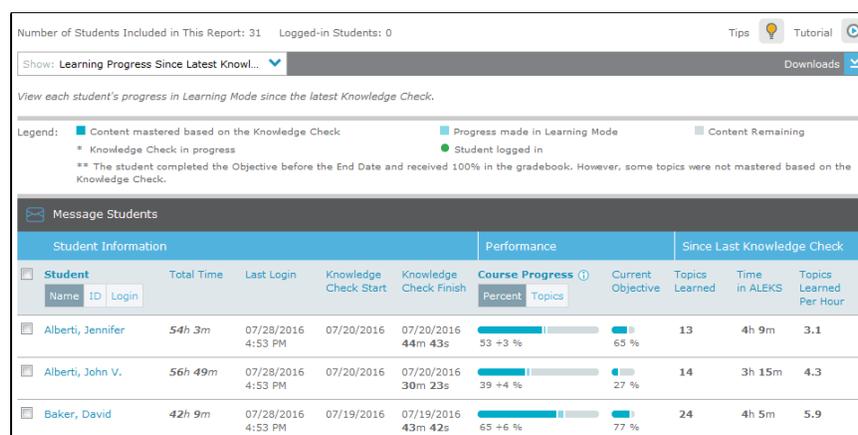


Figure 7.19: Learning Progress Since Latest Knowledge Check

This report shows each student's progress in Learning Mode since the most recent knowledge check (Fig. 7.19). It includes total hours spent in ALEKS, the last login date, the last knowledge check start and end date, total time in knowledge check, course performance displayed in a bar graph, and learning rates. There are several ways this report can be used:

- Identify which students are ahead, on pace, or behind in the class.
- Determine learning rates to use in assigning performance grades or for data tracking purposes.
- Recognize inconsistencies in student usage and progress to identify students needing individual instruction.

NOTE. If objectives are used in the class, the percentage of completion for the current objective is also displayed. For additional information on the interpretation of the bar graphs, see Sec. 7.3.5.

Number of Students Included in This Report: 31 Logged-in Students: 0 Tips Tutorial

Show: **Most Recent Knowledge Check** Downloads

View each student's mastery based on the most recent Knowledge Check.

Legend:
■ Content mastered based on the Knowledge Check ■ Content Remaining * Knowledge Check in progress
● Student logged in Ⓟ Progress Knowledge Check Ⓞ Comprehensive Knowledge Check

Message Students

Student Information							Performance
Student	Total Time	Last Login	Knowledge Check Start	Knowledge Check Finish	Reason		Course Progress
Name	ID	Login					Percent Topics
Alberti, Jennifer	54h 3m	07/28/2016 4:53 PM	07/20/2016	07/20/2016 44m 43s	Ⓞ Scheduled Assessment 2 Instructor Assigned Knowledge Check	<div style="width: 53%;"></div>	53 %
Alberti, John V.	56h 49m	07/28/2016 4:53 PM	07/20/2016	07/20/2016 30m 23s	Ⓞ Scheduled Assessment 2 Instructor Assigned Knowledge Check	<div style="width: 39%;"></div>	39 %
Baker, David	42h 9m	07/28/2016 4:53 PM	07/19/2016	07/19/2016 43m 42s	Ⓞ Scheduled Assessment 2 Instructor Assigned Knowledge Check	<div style="width: 65%;"></div>	65 %
Black, Charles C.	54h 3m	07/28/2016 4:53 PM	07/19/2016	07/19/2016 31m 24s	Ⓞ Scheduled Assessment 2 Instructor Assigned Knowledge Check	<div style="width: 61%;"></div>	61 %

Figure 7.20: Most Recent Knowledge Check

7.3.14 Most Recent Knowledge Check

This report can be used to view each student's mastery based on the most recent knowledge check taken (Fig. 7.20).

7.3.15 Best Performance in Learning Mode Over Time

Number of Students Included in This Report: 31 Logged-in Students: 0 Tips Tutorial

Show: **Best Performance in Learning Mode O...** Report from 08/02/2015 to 08/02/2016 (Change) Downloads

View each student's best course mastery in Learning Mode within any date range up to one year in the past.

Legend:
■ Content mastered based on the Knowledge Check ■ Progress made in Learning Mode ■ Content Remaining
● Student logged in Ⓟ Progress Knowledge Check Ⓞ Comprehensive Knowledge Check

Message Students

Student Information							Performance
Student	Total Time	Last Login	Knowledge Check Start	Knowledge Check Finish	Reason		Course Progress
Name	ID	Login					Percent Topics
Alberti, Jennifer	54h 3m	07/28/2016 4:53 PM	07/20/2016	07/20/2016 44m 43s	Ⓞ Scheduled Assessment 2 Instructor Assigned Knowledge Check	<div style="width: 53%;"></div>	53 +3 %
Alberti, John V.	56h 49m	07/28/2016 4:53 PM	07/20/2016	07/20/2016 30m 23s	Ⓞ Scheduled Assessment 2 Instructor Assigned Knowledge Check	<div style="width: 39%;"></div>	39 +4 %
Baker, David	42h 9m	07/28/2016 4:53 PM	07/19/2016	07/19/2016 43m 42s	Ⓞ Scheduled Assessment 2 Instructor Assigned Knowledge Check	<div style="width: 65%;"></div>	65 +6 %
Black, Charles C.	54h 3m	07/28/2016 4:53 PM	07/19/2016	07/19/2016 31m 24s	Ⓞ Scheduled Assessment 2 Instructor Assigned Knowledge Check	<div style="width: 61%;"></div>	61 +4 %

Figure 7.21: Best Performance in Learning Mode Over Time

This report can be used to view each student's best class mastery in Learning Mode within any date range up to one year in the past (Fig. 7.21). Set the date range using the **Change** link, then click **Apply**.

7.3.16 Progress in Knowledge Check Over Time

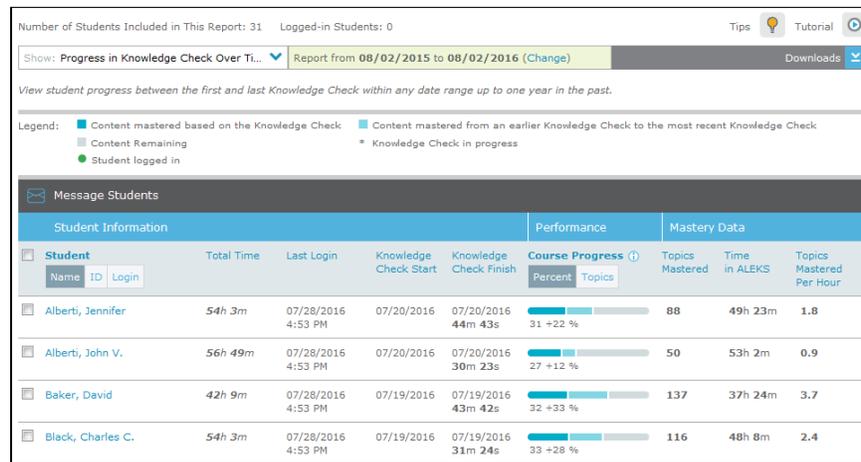


Figure 7.22: Progress in Knowledge Check Over Time

This report can be used to view each student's progress between the first and last knowledge checks within any date range up to one year in the past (Fig. 7.22). Set the date range using the **Change** link, then click **Apply**.

7.3.17 Detailed Progress History

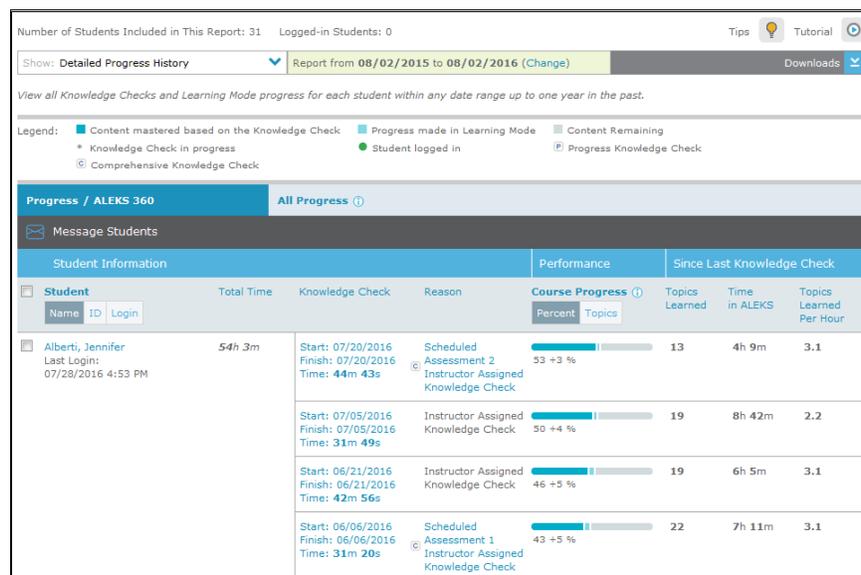


Figure 7.23: Detailed Progress History

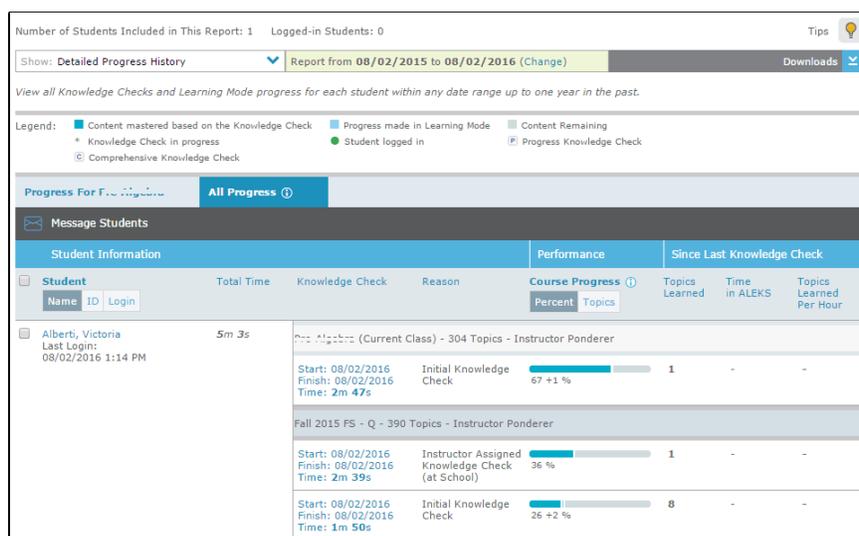


Figure 7.24: Progress History

This report is an expanded version of **Learning Progress Since Latest Knowledge Check** (Fig. 7.23). It shows a segment of the student’s learning history, including knowledge checks and Learning Mode progress for each student within the specified date range. Set the date range using the **Change** link, then click **Apply**. Clicking on the **All Progress** tab will display all students’ current and previous class progress results (if applicable) (Fig. 7.24). The current class can be distinguished by the **(Current Class)** label.

- Each bar graph represents an knowledge check taken by the student.
- The bar graphs are stacked, the earliest on the bottom and the most recent at the top.
- The date and reason for the knowledge check are to the left of each bar graph.

7.3.18 Progress Report for a Single Student

This report is obtained by selecting a student and then moving to the the **Reports** menu. Click on the **Progress** icon. The Progress Report for a single student in this class displays a list of bar graphs for the single student chosen (Fig. 7.25). There is one row for each knowledge check that the student has taken, with dates (linked to the Report page for that knowledge check). Clicking on the **All Results** tab will display the student’s current and previous class progress results (if applicable). Clicking on an knowledge check date link will take the instructor to the individual student’s pie report, displaying the student’s progress at that point in time (Sec. 7.3.8).

- The blue portion of each bar graph measures the student’s mastery as of the given knowledge check.

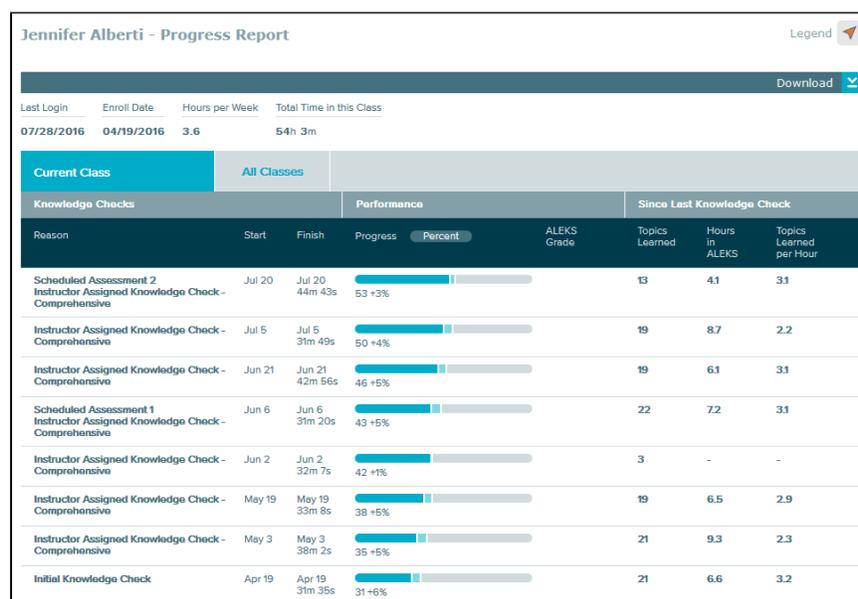


Figure 7.25: Progress Report for a Single Student

- The light blue portion of the bar measures progress made in the Learning Mode subsequent to that knowledge check (but before the next knowledge check, if there is one).
- The percentage values beneath the bars for the blue and light blue portions represent the knowledge check mastery, and subsequent progress in Learning Mode respectively. For example, 57+9% means that the last knowledge check showed 57% mastery, and that subsequent work in the Learning Mode added another 9% mastery for a total of 66%.
- Information on each knowledge check and total hours spent subsequently in the Learning Mode (up to the time of the next knowledge check) is also provided, with average numbers of items gained per hour.

7.3.19 Time and Topic Report



Using this report, instructors can quickly view the summary graph at the top of the report. Instructors can also see the amount of time spent by each student daily in ALEKS, as well as the topics the student has attempted and mastered each day. The report can be generated for the entire class or for individual students. (The number of topics attempted does not include topics the student worked on in Review mode.)

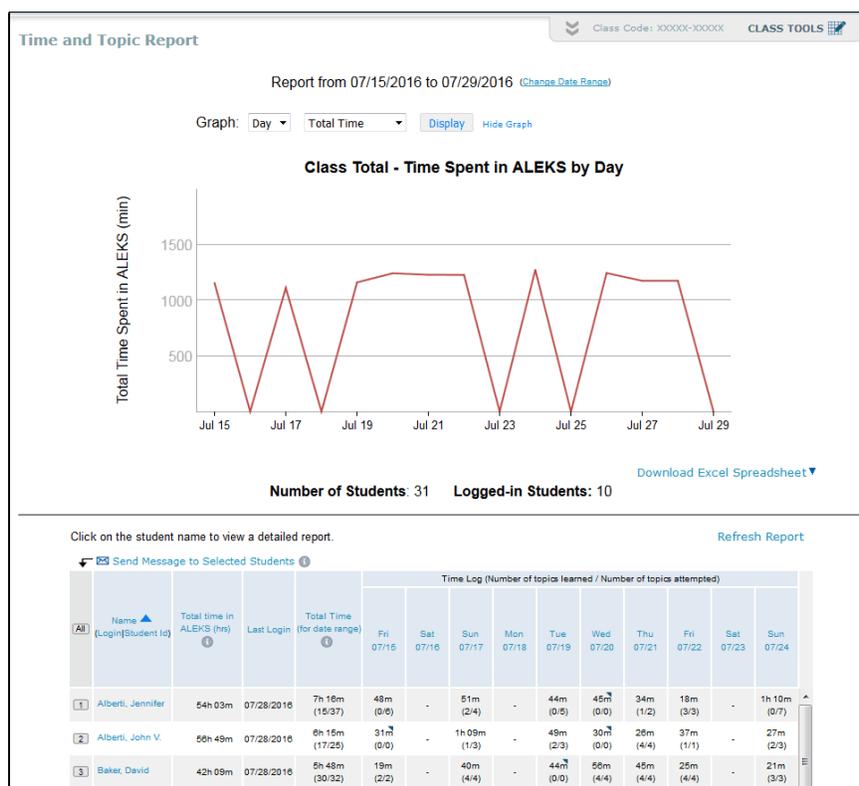


Figure 7.26: Class Time and Topic Report

7.3.20 Class Time and Topic Report

The following points describe the features of the class Time and Topic Report (Fig. 7.26):

- The report can be viewed in intervals ranging from 1 week up through 20 weeks. The time period can be adjusted by clicking on the **Change Date Range** link.
- The graph shows for each day the total time, average time, total topics, or average topics.
- The report displays the number of students enrolled in the class, the number of students logged in to ALEKS, and the amount of time each student has spent working in ALEKS on a daily basis.
- The number of topics mastered versus the number attempted is displayed below the daily time log.
- If a student has spent some time on an ALEKS knowledge check during that day, the session will be marked with a blue triangle in the upper right-hand corner.
- The total amount of time shown for a specific day includes time spent in Learning Mode, as well as any quizzes, homework, review problems, or knowledge check the student has done. Work done in QuickTables is not included in the report.

- Clicking on an individual student name will take you to the Individual Time and Topic report for that student (Sec. 7.3.21).

7.3.21 Individual Time and Topic Report

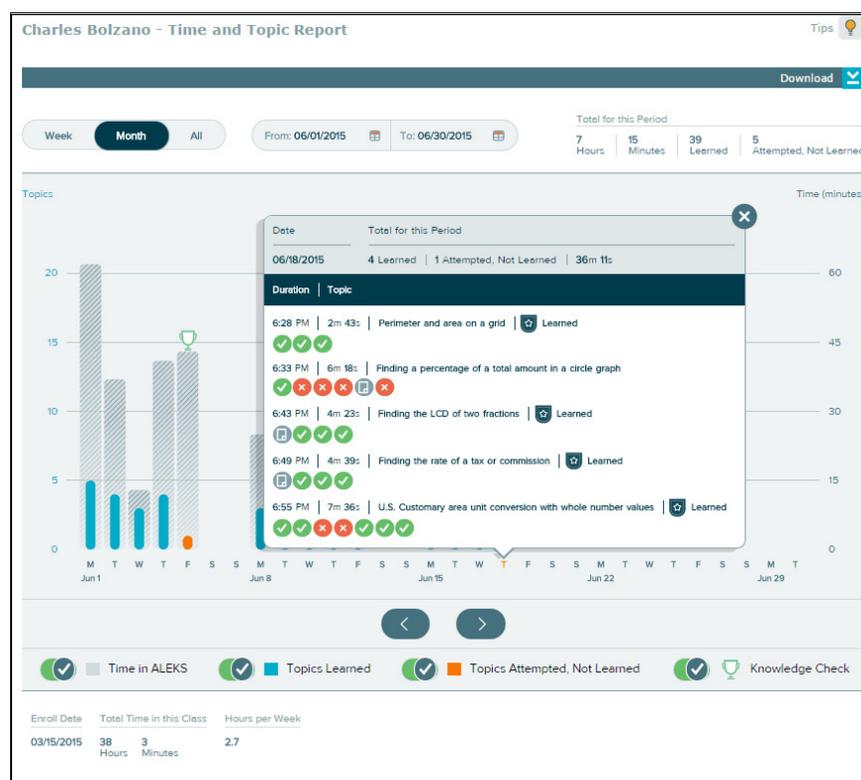


Figure 7.27: Individual Time and Topic Learning Log

The Individual Time and Topic report gives detailed information on the topics each student has attempted and mastered (Fig. 7.27). To see the student's Learning Sequence Log on a certain date, click on the grey column above the date. The Learning Sequence Log will display the time and result of the attempted topic. By clicking on the **Result** icon below the name of the topic (**Wrong**, **Correct**, or **Success**), you can see specific problem the student worked on, along with their answer and the solution.

A wider date range can be chosen for the individual report, up to six months at a time. This report also includes for the student, the last login date, the enrollment date, and hours worked per week.

Students can view their Time and Topic Report by clicking the **Report** link at the top of their page and selecting the appropriate tab.

7.3.22 Knowledge Per Slice

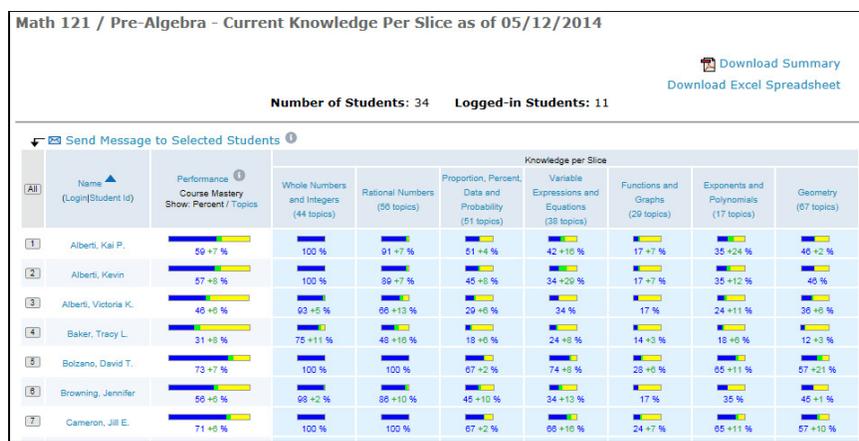


Figure 7.28: Knowledge Per Slice



This report shows each student's current mastery for each ALEKS pie slice in the class and can be generated for the entire class or for individual students (Fig. 7.28). It includes overall class mastery, followed by a breakdown of progress in each pie slice.

Instructors can use this report to determine whether more emphasis should be placed on certain areas of the class, or to compare overall progress in the class with progress in particular slices.

Instructors can download a PDF summary of data from the class report. Clicking the **Download Summary** link just above the report will generate a PDF that displays time spent in ALEKS, average topic mastery, and a comparison between the beginning knowledge state (based on the Initial Knowledge Check) and the current knowledge state for each pie slice. The report shows this data for both the class and individual student.

7.3.23 Assignment Reports



With the class selected, go to the Reports menu. Clicking on the **Assignments** icon will display a list of all assignments included in the currently selected class (Fig. 7.29). The **Show** drop-down menu can be used to filter the assignments by Homework, Quiz, Test, or Knowledge Check. Clicking on an assignment name will show the detailed class results for that assignment.

Assignment Type	Start Date	Due Date	Status	Class Average
End-yr	-	07/29/2015 06:27 PM	Current	1%
Scheduled Assessment	07/21/2015 08:00 AM	07/28/2015 08:00 AM	Not published to the student calendar	0%
Time - Week 19	07/19/2015 06:27 PM	07/26/2015 06:27 PM	Upcoming	0%
Topic - Week 19	07/19/2015 06:27 PM	07/26/2015 06:27 PM	Upcoming	100%
Time - Week 18	07/12/2015 06:27 PM	07/19/2015 06:27 PM	Upcoming	0%
Topic - Week 18	07/12/2015 06:27 PM	07/19/2015 06:27 PM	Upcoming	100%
Time - Week 17	07/05/2015 06:27 PM	07/12/2015 06:27 PM	Upcoming	0%
Topic - Week 17	07/05/2015 06:27 PM	07/12/2015 06:27 PM	Upcoming	100%
Test 2	08/29/2015 06:27 PM	07/13/2015 06:27 PM	Not published to the student calendar	0%

Figure 7.29: All Assignment Reports

Name (Login/Student Id)	Total time in ALEKS (hrs)	Last Login	Date	Assessment performance	grade
Albert, Joel A.	50.7	07/21/2016	07/08/2016	86 %	A
Balac, Ken R.	47.6	07/21/2016	07/08/2016	74 %	A
Bolzano, David K.	61.2	07/21/2016	07/11/2016	82 %	A
Bourbaki, Charles S.	62.7	07/21/2016	07/11/2016	89 %	A
Browning, Nicole P.	49.9	07/21/2016	07/08/2016	87 %	A
Chang, Carlos	59.7	07/21/2016	07/08/2016	82 %	A

Figure 7.30: Scheduled Assessment Report

7.3.24 Scheduled Knowledge Check Report

This report shows the results of the most recent assessment that has been scheduled for the class, in the form of a series of bar graphs (Fig. 7.30).

- A menu at the top of the display can be used to choose earlier scheduled assessments.
- The blue portion of each bar graph shows the student's knowledge as measured by the assessment.
- If the instructor has chosen to grade the assessment, grades for the assessment are shown (Sec. 7.5.9).

NOTE. Progress in Learning Mode is not shown in this view.

7.3.25 Homework, Quiz, and Test Results

Assignment Results (Student Scores)
Results currently available to the students.

[Download Excel Spreadsheet](#)

Quiz 2
View: [Student Scores](#) | [Per Question Results](#) | [Detailed Student Results](#)

Class Average: 88%
(34 out of 34 students)

Send Message to Selected Students

	Student	Date Submitted	Score	Grade
[1]	Alberti, Kai P.	09/23/2013	100%	A
[2]	Alberti, Kevin	09/22/2013	88%	B
[3]	Alberti, Victoria K.	09/20/2013	88%	B
[4]	Baker, Tracy L.	10/02/2013	94%	A
[5]	Bolzano, David T.	10/01/2013	82%	B
[6]	Browning, Jennifer	09/24/2013	88%	B
[7]	Cameron, Jill E.	09/23/2013	88%	B
[8]	Carter, Cindy B.	10/01/2013	88%	B
[9]	Cauchy, Joel K.	09/30/2013	71%	C

Figure 7.31: Quiz Results

This report shows the results on any given quiz and can be generated for the class or for individual students (Fig. 7.31). Clicking on the **Date Submitted** for any particular quiz will give the individual results of that quiz by question. It is also possible to see individual questions and answers submitted by each student. The option to view quiz results on a per-question basis may be useful for identifying specific class strengths and weaknesses.

7.3.26 Class Standards Report



The Standards report analyzes the current progress of the class in terms of the strands and substrands of the applicable standards (Fig. 7.32). For each strand, a vertical bar graph at the top of the display shows the mastery of that strand as measured by ALEKS; the numbers beneath each bar indicate the proportion of substrands under that strand which have been satisfied by the students, according to the parameters set beneath the bars.

The options appearing beneath the bars enable the instructor to choose:

- What percentage of ALEKS items supporting a substrand must be completed by a student for the student to be considered as satisfying that substrand (50% by default, with options of 60% and 70%);
- How the students' mastery of items will be determined: by initial knowledge check, by most recent knowledge check, or by most recent work in the Learning Mode;
- Which students will be used to calculate levels of achievement: all students in the class, or students who have spent at least a certain amount of time (10, 20, 30, 40, or 60 hours) using their ALEKS accounts.



Figure 7.32: Standards Report

Further down the page, the display provides complete detail on standards-based achievement by the class. The teacher can choose to see this detail organized by student (which substrands have been mastered by each student) or by substrand (what the precise level of satisfaction is for each substrand, with lists of ALEKS items supporting the substrands and how many of them individual students have mastered).

NOTE. Satisfaction of a substrand is defined (by default) as 50% of the ALEKS topics supporting it. There is a great deal of overlap in the coverage of the substrands, and this setting provides a meaningful way to track the students' progress.

7.3.27 Individual Standards Report

The Standards report for a single student analyzes the student's current progress in terms of the substrands of the applicable standard (Fig. 7.33). For each substrand, the page indicates how many ALEKS items supporting that substrand have been mastered by the student, with detail available on the specific items mastered and not mastered.

7.3.28 QuickTables Reports



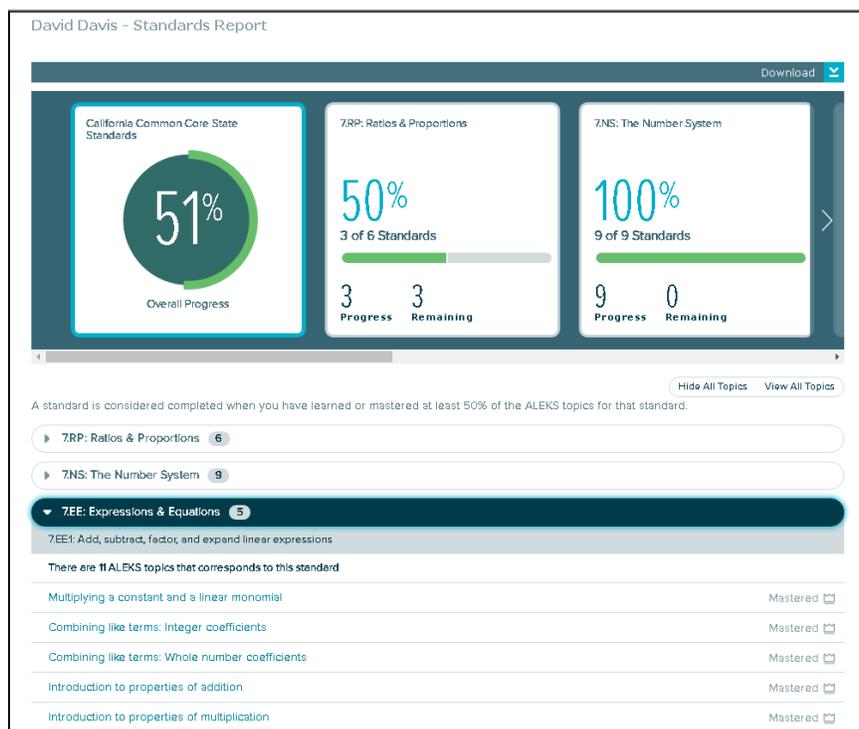


Figure 7.33: Standards Report for a Single Student

QuickTables reports can be generated for both the class and for individual students. These reports can also be accessed by clicking directly on the **QuickTables** menu. For a full description of the reports available for QuickTables, see Sec. 6.3.

7.3.29 Custom Reports



ALEKS administrators and instructors can create custom reports for their district, school, and classes with the Custom Reports feature. This feature has many options to suit advanced reporting needs across classes and instructors. Administrators and instructors can select data from existing ALEKS reports and export the combined data into a single customized Excel report. Additionally, reports can be scheduled ahead of time. Reports can be generated at multiple levels (e.g., district, school, instructor, class, and multi-class) based on the user's ALEKS account type. There are three main steps to creating a custom report: 1) Create Template, 2) Review and Save, and 3) Schedule Report. See below for further instruction.

NOTE. Data for the Custom Reports feature is available beginning from August 1, 2012.

What Are Custom Reports?

The Custom Reports feature allows you to tailor a report specific to your reporting needs. You can schedule a one-time report, or automate a report so that it runs daily, weekly, or monthly to ensure that you not only save time, but also receive the most up-to-date information.

How Does It Work?

- Start by creating a template and customize it to include the data fields that are available across the standard ALEKS reports.
- Schedule how often to run the report and select the specific students or classes to retrieve information on.
- After the report is generated, check your ALEKS inbox for your customized Excel report.

Create New Custom Report Template

The diagram illustrates the workflow for creating a custom report. It starts with a 'Create Template' step, followed by 'Schedule Report' which includes a calendar icon showing 'MARCH' and 'FRI 12'. The final step is 'Receive Excel Report in your ALEKS Inbox', represented by an Excel spreadsheet icon with a 'New' badge.

Figure 7.34: Custom Report Template

STEP 1. Create Template

1. Create Template
2. Review and Save
3. Schedule Report

Basic Information

Name:

Type: Class report

Select Data

Browse through the categories on the left and select the data you want to include in your report template. Each selected data field will represent a column in the report. Data fields will appear on the downloaded excel report in the order they are listed in the "Report Selections" window.

Add Data

- Student Information
?
- Assessment Performance
?
- Pie Mastery
?
- Gradebook
?
- Time and Topic
?

Report Selections clear all

Figure 7.35: Creating the Custom Report Template

Schedule Report

Report Name

Report Name:

Template: Summary Report **Type:** Class report

Output Format ⓘ

Excel 2007 and later (.xlsx)

Excel 2003 and earlier (.xls)

Display of Duration

Hours & Minutes (e.g. 1h12m)

Minutes (e.g. 72m)

Scheduling Options

One time report Recurring report

Report Start Date:

Month Day Year

Sep ▾ 19 ▾ 2014 ▾

[Class calendar](#)

Report End Date:

Month Day Year

Sep ▾ 19 ▾ 2014 ▾

[Class calendar](#)

Note: Maximum date range is 12 months. Data for assignments, objectives and scheduled assessments with due dates outside of the date range will be excluded.

Set report date range to

Student Options

Select Students

All students

Specific students

Type of Data ⓘ

Individual student data

Average for selected students

Figure 7.36: Scheduling a Custom Report

When first accessing the feature, administrators and instructors will see the introductory screen (Fig. 7.34). To begin creating the template, click on **Create New Custom Report Template** or the **+ New Report Template** on subsequent visits.

STEP 1: Create Template

By first creating a template, administrators and instructors can determine the foundation for their custom report, and then schedule multiple reports to run off the template. Templates can be re-used and duplicated to save time.

The following information must be selected when creating the template:

Basic Information

A name must be entered for the template.

Select Data

The data must be selected from the categories listed on the left of the screen (Fig. 7.35).

STEP 2: Review and Save

In this step, users will confirm and save their custom report parameters.

STEP 3: Schedule Report

Administrators and instructors can run multiple iterations of their template, modifying the date range and student/class/instructor data to focus on.

The following information must be selected when scheduling the report (Fig. 7.36):

Report Name

A name must be entered for the report, and choices made for the Excel format, and duration display.

Scheduling Options

You can choose whether to schedule a recurring report, or a one time report (the default).

Student Options

The options in this section are displayed based on the selected level of the report.

After a report has been scheduled, a confirmation message is displayed. A custom report may take up to 30-60 minutes to process depending on its size, and will be sent to the ALEKS inbox of the person who scheduled it.

7.4 Class Creation and Configuration (Class Administration)

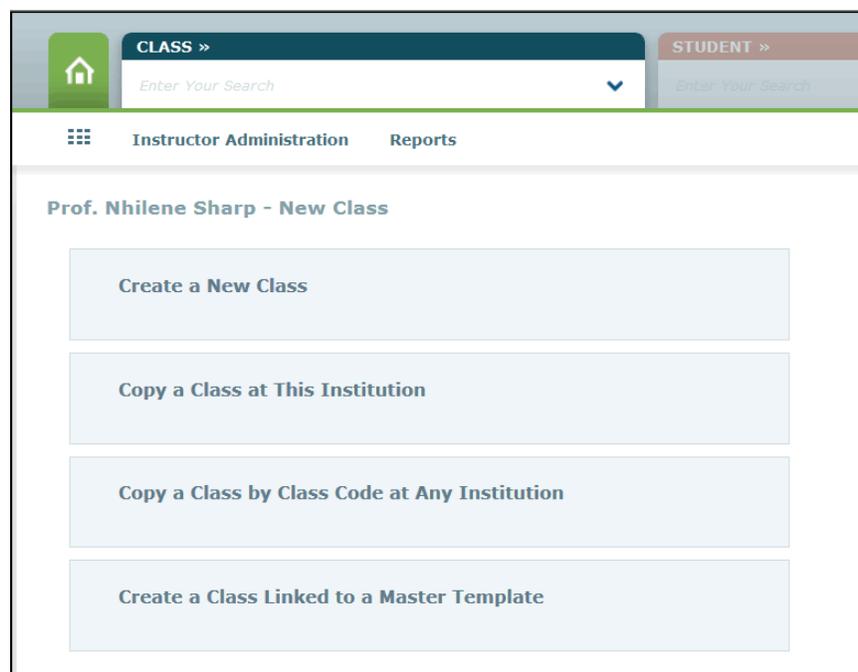


Figure 7.37: New Class

Classes can easily be created through the class creation wizard. From the Home page, select **Instructor Administration** then **New Class**. Alternatively, the instructor can choose a class then select **Class Administration** followed by **New Class**. There are various options for creating a class, as described below (Sec. 7.4.1).

The procedure for creating and editing a class includes the setup of Textbook Integration and content customization (if desired). It does not include creating Homework, Quizzes, Tests, or Scheduled Assessments, but these steps may be completed later.

7.4.1 Creating a Class

Selecting **New Class** displays the following options to create a class (Fig. 7.37):

Create a New Class

This option allows an entirely new class to be created.

Copy a Class at This Institution

This option allows the instructor to duplicate one of his or her own classes or a class from another instructor at the same institution.

Copy a Class by Class Code at Any Institution

This option allows an instructor to duplicate a class from another instructor at any institution (if the **Class Duplicate Setting**, for the class to be copied, has been set to **Public**).

Create a Class Linked to a Master Template

Master Templates must exist at this institution for this option to appear. This option enables a linked class to be created from a Master Template.

NOTE. ALEKS Administrators can duplicate any class.

7.4.2 Class Creation Wizard

Clicking on **Create a New Class** will display the class creation wizard (Fig. 7.38).

Class Information

Administrators can assign the class to another instructor when setting up the class. In the **Class Information** section the only optional field is the section name. The course product should not be changed after the class has begun unless absolutely necessary, as doing so will be disruptive to the students' learning and to the class reports and records. Other values on this page can usually be changed without disruption.

The class dates are used to configure the **Calendar**, and should include the entire period of time that the students will be using ALEKS (Sec. 7.4.41). By default, the class will be automatically archived after the class end date unless this option is deselected (Sec. 7.4.43).

Figure 7.38: Class Information

QuickTables

QuickTables may be added to the class during the creation process or at a later time. For full details about QuickTables, see Chap. 6.

Course Specific Settings

These are any specific settings that apply to this class, such as providing ALEKS graphing calculator functionality.

Continue to Class Summary or Customize This Class

The class will be created when you click on the **Create Class Now** button. The instructor can choose to see the **Class Summary** or **Customize This Class**.

To edit the Class Information and Course Specific Settings sections at a later time, select **Class Summary**, follow by **Class Information**, and then **Edit**.

7.4.3 Save for Later or Cancel

Save for Later and **Cancel** links have been added to the class creation wizard in order to improve the workflow for instructors. These links provide a way to save the data on each page throughout the wizard, so that class customization may be stopped midway and resumed at a later time. These links appear at the bottom of the wizard pages that follow the initial Class Information page.



Figure 7.39: Resume/Discard

Note that using the **Save for Later** or **Save and Exit** options saves the data, but that changes are not applied until class customization is complete. Instructors will see a confirmation message on the Class Summary page that allows them to **Resume** or **Discard** these changes (Fig. 7.39).

Selecting **Discard** will discard all changes made, and **Resume** will take instructors back to the last page they were working on during class customization.

When instructors log out of ALEKS and log back in, they can easily resume or discard their class customization through the dashboard message or through the Class Summary message.

In the event that another user concurrently makes changes to a class with customizations that are “Saved for Later,” messages will be shown indicating who was editing the content, and will provide an opportunity for these changes to be resumed or discarded. If changes have been made and saved by another user, the messages will indicate this also.

NOTE. The Save for Later link is not available in Master Template linked classes.

7.4.4 Textbook Integration

If an instructor chooses to customize the class after it has been created, the next page presented will be the **Class Content Customization**. Here, several choices can be made about the structure of the class, the first being whether to integrate a textbook or not. If a textbook is chosen from the list of available choices using the dropdown menu, ALEKS will automatically place chapter and section references to this textbook on the students’ explanation pages.

One choice in the list of textbooks is the **ALEKS Curriculum**, which is a division of the topics based on the slices of the ALEKS Pie rather than chapters of a textbook. This choice enables student learning to be structured without the use of a specific textbook.

7.4.5 Set Objectives / Modules

Instructor can choose to configure the class with a textbook or without textbook integration.

With Textbook Integration. The instructor can use chapter-based objectives with optional custom objectives, custom objectives alone, or no objectives.

Chapter-Based Objectives with Optional Custom Objectives

If this option is selected, you will be able to choose entire chapters from the textbook as objectives for your class, and set end dates or mastery levels for these objectives (Sec. 7.4.6). This is the most efficient way of directing student learning in ALEKS. You can also create custom objectives that combine chapter material freely into new units.

Both types of objectives will include all ALEKS topics that correspond to the chapter.

Custom Objectives

If this option is selected, you will need to create all of the objectives for your class manually. This option provides the instructor with the greatest control over the class structure.

Textbook Integration - No Objectives or Modules

If this option is selected, students will see references to the textbook, but the textbook will not direct their learning.

NOTE. If you choose any of the options for structuring objectives in your class, whether by textbook chapters, custom objectives, or a combination of the two, topics will not be included in the class unless they are included in one of your objectives, or are a prerequisite topic. It will be possible, however, to remove topics after they have been included as part of a chapter or custom objective (Sec. 7.4.8). If only custom objectives are used, it will not usually be necessary to do any further customization of the content.

No Textbook Integration. If no textbook is integrated within the class, no textbook will be referenced in ALEKS, and you will only have the choice of the following two options:

Objectives / Modules

If this option is selected, you will need to create all of the objectives for your class manually.

No Objectives or Modules

If this option is selected, student learning will be guided by ALEKS without objectives.

See the following sections for additional details about the choices outlined above.

7.4.6 Objective Completion

When setting up objectives for your ALEKS class, you can choose either to define end dates **or** to set a mastery level for each objective. When using mastery level for objective completion (objectives without end dates), instructors select a final day when all objectives will be due (usually around the end of the course).

Objectives / Modules with End Dates

When an end date is assigned to an objective, students should do their best to complete the objective before this date. After this date, students will be moved to the next objective, and the material in the past objective will not be available unless it is prerequisite for current learning. If students finish an objective before the due date, instructor has the option to move students to the next objective or open all objectives so students have the option to work on Ready to Learn topics in an objective until the next objective begins.

- To choose an end date, click in the box in the end date column. Each chapter/objective included must have an end date unless objectives are being used with mastery levels.
- The start date for the first chapter/objective is always the start date of the class. The start date for any other chapter/objective is one day after the end date of the previous chapter/objective.
- Start dates cannot be set manually, and each chapter included must have an end date. If you want objectives to overlap, you must make the end dates the same. Please keep in mind that objectives with the same end date are combined as a single column in the Gradebook.

Objectives without End Dates (mastery levels for Objectives)

If you choose this option, students will be moved to the next objective when they meet the mastery level set for the current objective (the default is 90%). Students will still be able to access the remaining unmastered topics from all previous objectives through the Topic Carousel by selecting the downward arrow tab in the upper left corner of the screen. A final due date must be set for all objectives, this is the date when scores for all objectives will be sent to the gradebook. The default setting for this date is the end date of the class.

7.4.7 Objectives Editor

Initially, all textbook chapters appear in their normal, order and all are checked for inclusion in the class (Fig. 7.40).

- Remove chapters by unchecking the box to the left of the objective.
- Reorder chapters (or custom objectives) by dragging and dropping the chapter to a different position. Chapters can also be reordered by using the arrows in the **Order** column.
- Edit an objective/chapter by clicking on the **Edit** link below the objective name. This will open the **Edit Objective** page described below (Sec. 7.4.8).
- Check the box next to each chapter/objective to enable a post objective progress assessment (Sec. 7.4.10)

Instructor: Smith Name: Math 117 Course Product: Middle School Math Course 2 Start Date: 04/10/2016 End Date: 09/29/2016 Textbook: Math Course 2 (McGraw-Hill, 2015, Paperback)				
Switch to Objectives with End Dates				
Objective	Progress Level	Post Objective Progress Assessment	Order	
<input checked="" type="checkbox"/> Course Readiness Edit (94 goal topics)	<input type="text" value="90"/> %	<input checked="" type="checkbox"/>		▲▼
<input checked="" type="checkbox"/> Chapter 1 Edit (39 goal topics)	<input type="text" value="90"/> %	<input checked="" type="checkbox"/>		▲▼
<input checked="" type="checkbox"/> Chapter 2 Edit (33 goal topics)	<input type="text" value="90"/> %	<input checked="" type="checkbox"/>		▲▼
<input checked="" type="checkbox"/> Chapter 3 Edit (28 goal topics)	<input type="text" value="90"/> %	<input checked="" type="checkbox"/>		▲▼
<input checked="" type="checkbox"/> Chapter 4 Edit (65 goal topics)	<input type="text" value="90"/> %	<input checked="" type="checkbox"/>		▲▼
<input checked="" type="checkbox"/> Chapter 5 Edit (32 goal topics)	<input type="text" value="90"/> %	<input checked="" type="checkbox"/>		▲▼
<input checked="" type="checkbox"/> Chapter 6 Edit (54 goal topics)	<input type="text" value="90"/> %	<input checked="" type="checkbox"/>		▲▼

Figure 7.40: Objectives Editor

- To create an objective that does not correspond exactly to a textbook chapter or ALEKS slice, use the button marked **+New Custom Objective**, located below the list of textbook chapters/objectives.

NOTE. ALEKS permits you to order chapters freely, but a reasonable and conventional ordering of the materials should be used. ALEKS will move topics among chapters in order to maintain prerequisite relations among specific topics, with the result that an unusual ordering of the chapters may not produce the best results for your course structure. Only minor adjustments should be made to the content once students have begun working, to avoid disruption of the students' work.

To return to the Objective Editor at a later time, select **Class Summary**, locate **Class Content**, follow by **Objectives Editor**, and select **Edit**.

7.4.8 Edit Objective

Any objective content can be edited and deleted inside the **Edit Objective** window (Fig. 7.41), found by clicking on the **Edit** link below the objective name in the **Objective Editor** page. Custom objectives can also be deleted from the **Edit Objective** window.

Using this tool, chapters (or ALEKS curriculum slices) can be divided into parts or material can be combined across multiple chapters.

The Textbook View allows you to select content based on the structure of the textbook. The Slice View allows you to select content based on the structure of the ALEKS Pie Chart.

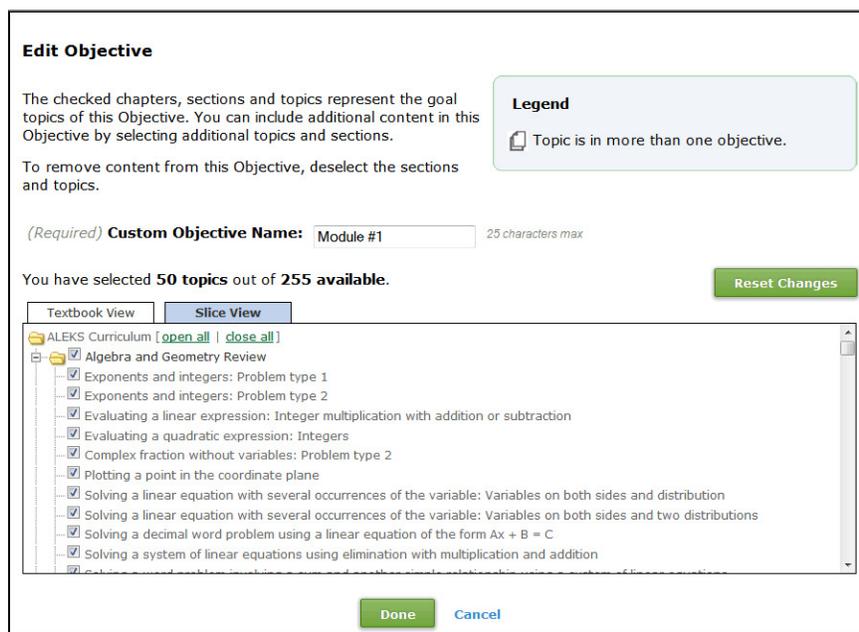


Figure 7.41: Edit Objectives

A specific textbook is integrated with the class

For chapter-based objectives there will be a Textbook View of items. When editing chapter based objectives, it will be possible to add topics only to the chapter in which they belong. For custom objectives there will be a Textbook View and a Slice View of items.

The ALEKS curriculum is integrated with the class

For slice-based objectives and custom objectives there will be a Slice View of items.

No Textbook Integration is in use

Custom objectives will present items from the Slice View.

Topics may be added or removed from objectives as follows:

- Click on the plus sign (+) to the left of each folder to view its contents.
- Check the box to the left of a topic name to include that topic in your objective.
- To see a sample problem for any topic, double-click on the topic name.
- Check the box to the right of a folder icon to include all topics in that folder.

A running count of the number of included topics will be displayed just above the directory window.

- Use the **Custom Objective Name** field to change the name assigned to the objective.

- Click the **Done** button when you have finished customizing the objective.

The new objective will appear in the table of objectives. An end date or mastery level should be entered, depending on the objective completion method in use (Sec. 7.4.6). This procedure can be repeated to create additional custom objectives.

NOTE. In classes that are configured with objectives, the Objective Editor will only display topics contained and structured according to those objectives. If an instructor removes a substantial number of fundamental topics from the class, the Topic Recommendation Tool will calculate whether any prerequisite topics are missing, and allow the instructor to add them back for optimal learning (Sec. 7.4.9).

When objective customization is complete, click on the **Continue** button to review the settings. Click on **Save** to finalize the setup.

7.4.9 Topic Recommendation Tool (TREC)

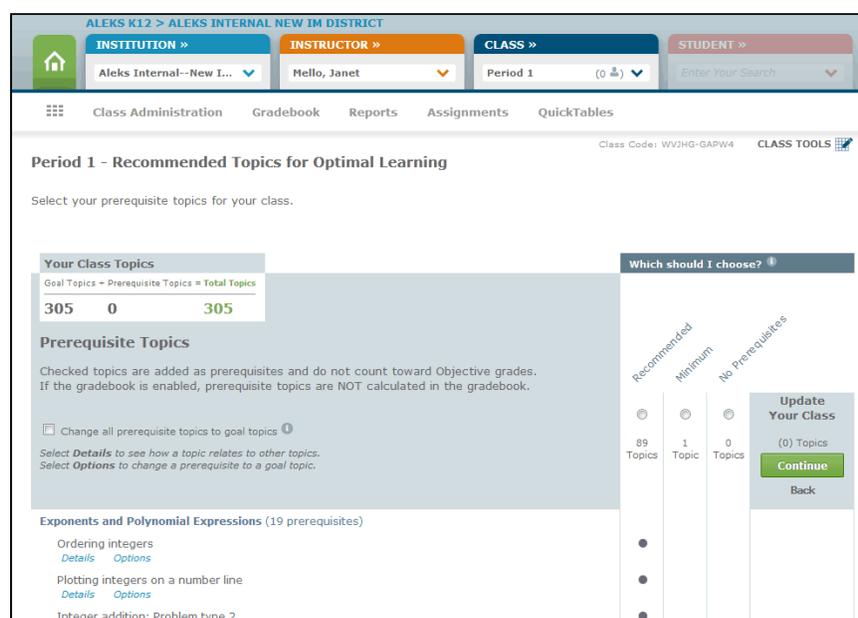


Figure 7.42: Topic Recommendation Tool (TREC)

The ALEKS Topic Recommendation Tool (TREC) provides instructors with a way to add prerequisite topics to their class content that may have been omitted during the creation/editing process (Fig. 7.42).

The TREC tool is only displayed when necessary. For example, if an instructor only changes objective due dates, without changing any actual content, TREC will be skipped.

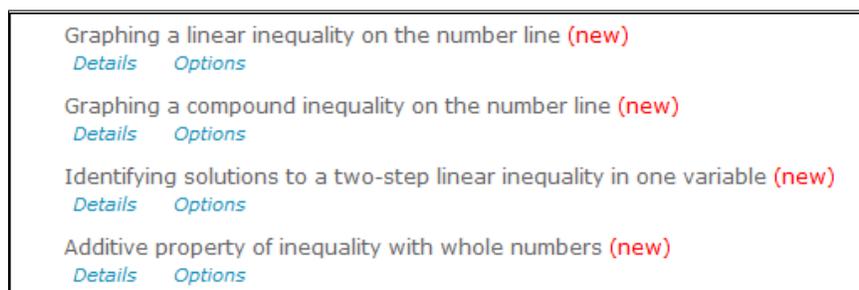


Figure 7.43: Tagging Feature

The TREC Tool displays one or more columns of recommended prerequisite topics, and instructors must select a column before being able to continue. Selecting the **Details** link will allow you to see how a topic relates to other topics.

Adding Topics to a Class

Clicking on the **Options** link will display more information about the topic and allow you to add the topic to an existing objective. Adding a prerequisite topic to an objective makes the topic a goal topic in that objective.

Topics may also be added to the course content, that are not added to an objective. These topics when completed will not count toward objective grades, if the gradebook has been enabled for the course.

The **Class Content** section of the **Class Summary** page will contain a breakdown of goal topics and prerequisite topics if applicable (Sec. 7.4.18). There will also be a link to edit the prerequisites in the TREC tool on the Class Content section. This breakdown of goal and prerequisite topics will also be included on the Course Syllabus (Sec. 7.4.16).

Currently in Class

After the class content has been edited, a **Currently in Class** column will appear. These topics are prerequisite topics that are currently in the class content but not part of any particular objective.

Recommended

These topics are recommended prerequisite topics that support instructional scaffolding and optimal learning. This selection should be used with typical classes that have some students who need additional review.

Minimum

These prerequisite topics are the minimum number of topics required for students to complete goal topics. This selection should only be used for classes where all the students do NOT need review of prerequisite topics.

No Prerequisites

Instructors can choose not to add any topics. This selection will not retain prerequisite topics; all previously added prerequisite topics will be removed.

New Tagging Feature

On subsequent visits to the TREC tool, topics not previously recommended to the instructor will be identified as **new** (Fig. 7.43).

7.4.10 Post Objective Progress Assessment

When students complete an objective assignment before the scheduled end date or reach the assigned mastery level (for objectives without end dates), they can either be assessed automatically on their mastery of this material or be moved to the next objective without an assessment.

Students who do not complete the objective material before the due date, or who do not meet the mastery level, will not have an assessment triggered by this option.

As with all assessments, once the student has started the assessment, they must complete it, even if the due date for the objective has passed.

- The assessment score will not affect the student's score for the objective completion in the Gradebook.
- This assessment will reset the **assessment clock** so that the student will not have two assessments in quick succession.
- To avoid the over-assessment of students, ALEKS will prevent all automatic assessments for students with 10 or fewer items remaining in an objective, or in the 48 hours preceding the end date of the objective.
- If there is no end date for the objective, automatic assessments will be prevented for students with 10 or fewer items remaining to complete the current objective, regardless of the mastery levels set.

7.4.11 Content Editor

The Content Editor is mainly for use in classes where **objectives are not in use**. If an instructor removes a substantial number of fundamental topics from the class, the Topic Recommendation Tool will calculate whether any prerequisite topics are missing, and allow the instructor to add them back for optimal learning (Sec. 7.4.9).

To access the Content Editor from the Class Summary, locate the **Class Content** section, and then click on **Edit** next to **Content Customization**. On the page that follows, click **Continue** to arrive at the Content Editor.

In the Content Editor:

- All topics that are checked are currently included in the class.
- Unchecked topics are excluded from the class.
- Topics may be checked to include them in the class, or unchecked to remove them.

- To see a sample problem for any topic, double-click on the topic name.

In classes that are configured with objectives, the Content Editor will only display topics contained and structured according to those objectives. The class content can be modified through the Objectives Editor (Sec. 7.4.7) and (Sec. 7.4.8).

Textbook integration tailors the contents of the ALEKS class to the content of the textbook, so that some topics normally included in a given ALEKS course product may be omitted. Even though ALEKS allows relative freedom to determine the content of your class, caution should be used regarding deep cuts to the content, as these may cause ALEKS to function incorrectly. Only minor adjustments should be made to the content once students have begun working, to avoid disruption of the students' work.

7.4.12 Section Level Content

For certain textbooks, the ALEKS items displayed in the Content Editor are organized not only by chapter, but also by section, making it more convenient to customize content on the basis of the textbook structure. Where available, section-level organization is also visible when you are choosing topics to include in Homework, Quizzes, and Test assignments.

7.4.13 Supplementary Textbook Topics

When textbook integration is used, you can also choose to include supplementary class topics available in ALEKS for certain textbooks. These supplementary topics are not specifically covered in the textbook, but can logically be associated with particular chapters. These supplementary topics are excluded from the class by default and must be manually included. Not all ALEKS classes have supplementary topics.

7.4.14 Core Readiness Topics in the Content Editor

For some textbooks integrated with ALEKS, there is an initial chapter, preceding Chapter 1, that may be called a "Readiness Chapter." (The exact name of the Readiness Chapter can vary from one book to another.) This chapter contains material that is not strictly part of the class coverage, but is important as foundational material.

If you would like the Readiness/Review chapter to be a distinct unit in the student's work, it should be assigned a completion date, like other chapters. If no separate completion date is assigned to this chapter, its core material will still be included, but as part of the first chapter.

For classes not using textbook integration, these topics will be listed in the Content Editor under the section "Core Readiness Topics"; you may remove as many of these topics as you wish. The other (non-core) topics coming from the Readiness Chapter are

<p>QuickTables Settings / Edit</p> <p>QuickTables have not been set.</p> <p>Set QuickTables</p>	<p>Class Duplicate Settings / Edit</p> <p>Status: Private</p> <p>Colleagues and peers cannot duplicate the settings, content and assignments for this class.</p>
<p>Implementation Information / Edit</p> <p>Student Goal</p> <p>Mastery: N/A</p> <p>Min Time Required: N/A</p> <p>Implementation Scenario</p> <p>Scenario: N/A</p>	<p>Gradebook</p> <p>Enabled</p> <p>Gradebook Setup</p>
<p>Resources / Edit</p> <p>There are no resources for this class.</p>	<p>Incoming & Exiting / Edit</p> <p>Incoming Students will pickup where they left off.</p> <p>Trigger a progress assessment Carry over Objective grades Exclude students whose initial assessment was 30 or more days ago</p> <p>Exiting Keep a record of student data if the student was enrolled 15 days or more.</p>
	<p>Share Class Access</p> <p>Share Access to this Class</p>
	<p>Student Groups</p> <p>Create a Student Group</p>

Figure 7.45: Class Summary Part 2

- Resources (Sec. 7.4.30)
- Incoming and Exiting (Sec. 7.4.31)
- Share Class Access (Sec. 7.4.32)
- Student Groups (Sec. 7.4.33)

Click on **Edit** for any area to go back and revise your choices, or use the available links.

7.4.16 Syllabus

On the **Class Summary** page there is a link to download the ALEKS Class Syllabus. Two formats are available, an HTML webpage or a PDF document. The ALEKS Class Syllabus contains a detailed summary of the class configuration. This syllabus can be printed as a convenient reference or as documentation of the class setup.

7.4.17 Standards

On the **Class Summary** page there is a link to details of any state or Common Core standards that the class is aligned with. For each class, reporting will be available based

on the applicable standard (Sec. 7.3.26)

7.4.18 Class Content

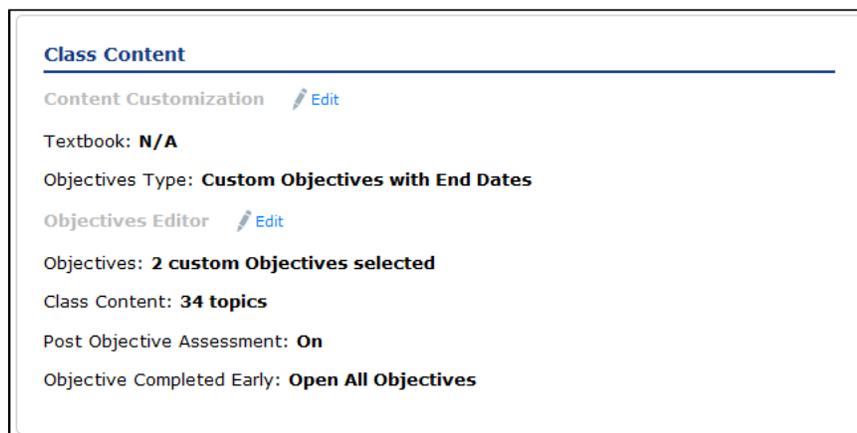


Figure 7.46: Course Content

This section on the **Class Summary** page contains the class customization options previously chosen such as textbook integration, objectives, and the objective settings (Fig. 7.46). These selections can be revisited by clicking on the **Edit** links in this section. Clicking on the **Edit Prerequisites** link (if available) will allow you to change prerequisite choices in the TREC tool (Sec. 7.4.9).

7.4.19 Class Options

Many options to edit the class settings are provided in the **Class Options** section of the **Class Summary** page, including the following:

- Access Options (Sec. 7.4.20)
- Student Activity Notifications (Sec. 7.4.21)
- Learning Options (Sec. 7.4.22)
- Parent Notification (Sec. 7.4.23)
- Class Forum (Sec. 7.4.40)
- Student Assessment Options (Sec. 7.4.24)
- Worksheet Options (Sec. 7.4.25)

Click on **Edit** to revise any of these options.

7.4.20 Access Options

From the **Class Summary** page under **Class Options**, click on **Edit** to find the **Access Options**. In this section the following access options are available:

- Student Enrollment Status can be set to Open or Closed, to allow or prevent students from enrolling in this class.
- Class Access can be set to Regular or Denied, to allow or prevent currently enrolled students from accessing this class.
- The Archive Status may be set to archived or unarchived (Sec. 7.4.43).

7.4.21 Student Activity Notifications

From the **Class Summary** page under **Class Options**, click on **Edit** to find **Student Activity Notifications**. In this section the instructor can request to be notified (and the student be notified) when a student completes an objective. The instructor can also choose to be notified and to present a certificate of achievement to students completing certain percentages of the syllabus.

7.4.22 Learning Options

From the **Class Summary** page under **Class Options**, click on **Edit** to find **Learning Options**. In this section, instructors can choose to allow students to see a Learning Page first before being given a problem to solve, show learning resources on problem page, or show the **Send Message to Instructor** button inside the learning module. These options are on by default.

7.4.23 Parent Notification

From the **Class Summary** page under **Class Options**, click on **Edit** to find **Parent Notification**. This feature allows instructors to elect to email periodic automatic progress reports to the student's parent/guardian, and to allow the parent/guardian to reply directly to these emailed reports.

Instructors can enter up to two email addresses for each student in the student's **Account Summary** (Sec. 7.8.1).

7.4.24 Student Assessment Options

From the **Class Summary** page under **Class Options**, click on **Edit** to find **Student Assessment Options**. If the school has IP addresses in place at the school level in ALEKS, the locations that assessments can be taken from may be restricted to these

IP addresses. This setting may be differentiated for the Initial Assessment and all subsequent assessments.

Instructors can also delay progress assessment. This feature allows students to finish other assignments or goals before taking the assessment. The assessment delay feature will apply to subsequent or future assessments, not if the assessment is either current or in the past.

7.4.25 Worksheet Options

Figure 7.47: Worksheet Options

From the **Class Summary** page under **Class Options**, click on **Edit** to find **Worksheet Options** (Fig. 7.47). Worksheets consist of 16 questions; by default, these are drawn from the student’s recent learning history, but optionally four of the 16 may be chosen from material that the student may be working on soon (**Ready to Learn Questions**). Instructors can also manually select their own worksheet combination by using the drop-down menus to specify the number of **Review Questions** or **Ready to Learn Questions**, to include in the worksheet. By default, the instructor always receives messages in ALEKS with the answers to worksheets that students have generated independently. This option can be turned off.

Other options are:

- Remind the students to print a worksheet at the end of an ALEKS session.
- Allow students see the answers to their worksheets.
- Always generate a new worksheet; by default, this only occurs after the student has done some work in Learning Mode.

7.4.26 QuickTables Settings

From the **Class Summary** page there are links in this section that enable instructors to edit and create QuickTables and adjust class settings. For more information, see Sec. 6.1.3.

7.4.27 Implementation Information

From the **Class Summary** page there is a link to an **Implementation Information** page where instructors are encouraged to enter information about their setup and use of ALEKS. This information helps enable effective training and identify best practices.

7.4.28 Class Duplicate Settings

Class Duplicate Settings

Settings

Adjust your class duplicate settings if you want to allow other instructors to duplicate this class.

Private: Do not allow other instructors to duplicate this class
Note: ALEKS Administrators at your institution can always duplicate your class.

Public: Allow other instructors to duplicate this class if they have the class code
Note: You will be notified via the ALEKS Message Center when another instructor duplicates your class.

Please specify the settings you would like other instructors to be able to duplicate.

<input type="checkbox"/> Objectives	<input type="checkbox"/> Class Resources
<input type="checkbox"/> Homeworks	<input type="checkbox"/> Ebook Notes
<input type="checkbox"/> Quizzes	<input type="checkbox"/> Calendar Notes
<input type="checkbox"/> Tests	<input type="checkbox"/> Gradebook Setup
<input type="checkbox"/> Scheduled Assessments	<input type="checkbox"/> QuickTables Quizzes
	<input type="checkbox"/> QuickTables Assessments

Figure 7.48: Class Duplicate Settings

From the **Class Summary** page there is a link to the **Class Duplicate Settings** (Fig. 7.48). In this section instructors can adjust class settings that allow other instructors to duplicate this class. To duplicate a class belonging to another instructor, the instructor will need the class code (Sec. 7.4.1).

NOTE. ALEKS Administrators at the institution can always duplicate any class.

7.4.29 Gradebook

From the **Class Summary** page, instructors may access the **Gradebook Setup** page. For full details about the Gradebook, see Sec. 7.6.

7.4.30 Resources

Name and Type

Enter a Resource Name

Choose a Resource Type

File: No file selected.

Link (URL): Tag this resource as a video

Note: 250 characters max

Organize Resource (Optional)

Add this resource to an existing folder in the Resources table

Student Resource Visibility

Display this resource on each student's Resources page when student is in Learning Mode. The resource will be accessible and organized in the order specified by the instructor.

Link Resource to Topics

Link this resource to individual topics. Students will be able to view this resource on the Explain pages for the selected topics. Select one or more topics below. Preview topics by double clicking or tapping the topic name twice.

Topics selected: 0

- Algebra 1
- Arithmetic Readiness
- Whole Numbers
 - (arith078) Rounding to tens or hundreds
 - (arith123) Rounding to hundreds or thousands
 - (arith233) Introduction to exponents

Figure 7.49: Resources

From the **Class Summary** page there is a link to the **Resources** feature. This feature can also be accessed from **Class Administration** and the **Class Tools** icon.

Resources can be added in ALEKS at the class or individual topic level. With this feature, instructors can share files, links, and notes to aid student learning. Students can access these resources through the Resources page and/or Explain pages of ALEKS based on the accessibility options selected by the instructor. An example of a resource is an online video that relates to a particular topic in ALEKS.

Instructors can begin by adding resources or by creating folders to organize the resources. Resources and folders can be added at any time and in any order, and folders can be further organized by creating subfolders.

Below are the resource requirements (Fig. 7.49):

- Three types of resources can be added: files, links, or text-only notes (250 characters or fewer).
- Valid URLs must begin with **http://**, **https://** or **www**.

- There is no limitation on the number of resources that can be uploaded per topic.
- The file upload size is limited to 4MB per file, and the total amount of resources that instructors can upload in any class is limited to 100MB. Many file extensions are accepted for upload.

7.4.31 Incoming and Exiting Student Options

These settings determine the rules for assessments, objective grades, and student data when they switch from one class to another within the same course family or course product. These settings can be customized at the Institution, Master Template, and class level.

Incoming Students from a class using a closely related course or same Course Product:

Students Will Pick Up Where They Left Off

Students' pie progress will be carried over to this class. Optional Settings for these students are to trigger a progress assessment, or carry over objective grades. Students whose last initial assessment was more than a certain number of days may be given an initial assessment.

Fresh Start

All students will be given an Initial Assessment.

Exiting Students, regardless of what course product they are going to:

Always keep a record of student data in my class, regardless if they exit my class (Recommended)

These students will appear as "Former" students in class rosters.

Keep a record of student data if the student was enrolled for more than a certain number of days

These students will appear as "Former" students in class rosters.

Never keep a record of student data in my class

There will be no record kept of the student's work in the first class, as though he or she had not been in that class.

NOTE. At the school level, there is a **Lock** option, to prevent individual instructors from changing these options at the class level. Please also note that the settings above **do not** apply to students switching classes within the same Master Template.

Note also that these settings do not all apply when the student is moving between courses linked to the same Master Template (Sec. 7.10).

7.4.32 Share Class Access

From the **Class Summary** page there is a link to the **Share Class Access** feature. This feature can also be accessed from the **Class Administration**.

Instructors can share access to their classes with TAs (Teaching Assistants) and other instructors by assigning access levels. Only TAs and Instructors who have been set up in ALEKS will be included in the list of instructors to share the class with.

The instructor of the class will have the following options for assigning an access level:

- No Access
- Full
- Gradebook
- Read Only
- Assign per Student

A shared class will be listed for shared instructors with a “S” next to the name in class lists.

NOTE. ALEKS Administrators always have full access to all classes within the school.

7.4.33 Student Groups

From the **Class Summary** page there is a link to the **Student Groups** feature. This feature can also be accessed from the **Class Administration**.

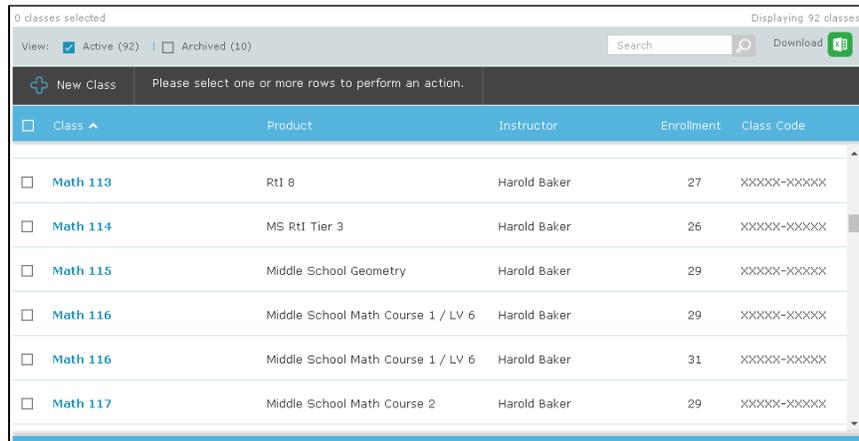
Instructors can divide their classes into Student Groups for filtering reports and Gradebook scores. Students can be added to more than one Student Group; in other words, Groups can overlap. The Student Groups Filter can also be accessed at the Class Level Dashboard.

7.4.34 Class List

Under **Class Administration**, select **Class List**. This feature can also be accessed from the **Instructor Administration**. A list of the instructor’s classes will be displayed (Fig. 7.50). ALEKS Administrators will see all ALEKS classes for each instructor at the school.

When one or more classes are selected by checking the box to the left of a class, the following actions will become available (when applicable):

- New Class (Sec. 7.4.1)
- Class Summary (Sec. 7.4.15)
- Dashboard (Sec. 7.1.4)



0 classes selected Displaying 92 classes

View: Active (92) | Archived (10) Search Download 

[+ New Class](#) Please select one or more rows to perform an action.

<input type="checkbox"/>	Class ^	Product	Instructor	Enrollment	Class Code
<input type="checkbox"/>	Math 113	RtI 8	Harold Baker	27	XXXXX-XXXXX
<input type="checkbox"/>	Math 114	MS RtI Tier 3	Harold Baker	26	XXXXX-XXXXX
<input type="checkbox"/>	Math 115	Middle School Geometry	Harold Baker	29	XXXXX-XXXXX
<input type="checkbox"/>	Math 116	Middle School Math Course 1 / LV 6	Harold Baker	29	XXXXX-XXXXX
<input type="checkbox"/>	Math 116	Middle School Math Course 1 / LV 6	Harold Baker	31	XXXXX-XXXXX
<input type="checkbox"/>	Math 117	Middle School Math Course 2	Harold Baker	29	XXXXX-XXXXX

Figure 7.50: Class List

- Duplicate (Sec. 7.4.1)
- Archive (Sec. 7.4.43)
- Delete (only available if no students are enrolled in the class)

7.4.35 Cleanup Tool

From the **Class Administration**, select **Cleanup Tool**. This feature is used to clear statistics and records at the class level. The tool should be used with **extreme caution**. The action is irreversible and may cause great disruption to your class.

Clear Statistics

This will clear time logged by students in this class.

Clear Statistics and Records

This will clear time and data accumulated in this class. Students will be prompted to complete a new Initial Assessment. Please contact Customer Support for this request.

7.4.36 Class Roster

From the **Class Administration**, select **Class Roster**. A list of the students enrolled in the class will be displayed (Fig. 7.51).

When one or more students are selected by checking the box to the left of a student, the following actions will become available (when applicable):

Dashboard

To display the student's **Dashboard** (Sec. 7.1.4).

Low Mastery % - Class Roster

1 Student selected Displaying 2 Students

View: Active (2) Former (1) Hidden (0) Download

Dashboard Account Summary Send Msg Move Unenroll Hide Disable

Name	Mastery	Login	ID	Group	Enrolled	Expires	Last Login
<input checked="" type="checkbox"/> Aleks, Nhi	83%	NALEKS258	abc123	-	12/11/14	04/08/15	03/04/15 2:41 PM
<input type="checkbox"/> Best, Nhi	-	NBEST38	adc123	-	03/05/15	03/22/15	03/05/15 6:09 PM

Figure 7.51: Class Roster

Account Summary

To display the student's **Account Summary**.

Send Msg

To send a message to the selected student(s).

Move

To move the student to a new class.

Unenroll

To unenroll the student from the current class.

Hide

To hide the student from the class.

Disable

To disable the student from accessing the current class.

Students are tagged as Active, Former, or Hidden. For information about filtering students in the roster, see Sec. 7.2.9.

7.4.37 Enroll / Pre-Register Students

From the **Class Administration**, select **Enroll / Pre-Register Students**. This feature allows instructors to register a group of students at the same time for a single class. Students do not need to self-register when instructors use this pre-registration feature.

Student information can be entered by typing, or copied and pasted from another source (such as a spreadsheet).

It is only possible to pre-register students up to the number of available subscriptions.

7.4.38 Authorize Students

From the **Class Administration**, select **Authorize Students**. When students self-register into the class, this feature allows instructors to authorize the students's registration in their own classes so that the student can begin using ALEKS.

1. Select the student(s) that you would like to authorize.
2. Select an action from the drop-down menu.
3. Click on the **Apply** button.
4. Confirm that you want to proceed with the chosen action.

7.4.39 Extend Student Accounts

Choose the subscription type that will be used to extend your students

Subscription Type:
 [Order Additional ALEKS Subscriptions](#)

Check the box next to one or more student accounts to extend. Then, select the **Extend** button.

Important: After selecting **Extend**, the student account(s) will be renewed and assigned a subscription.
The new subscription will be used immediately after the old subscription expires.

Filter by Expiration Date:

0 Students selected Displaying 0 Students

Select one or more students to extend their accounts.

<input type="checkbox"/>	Student	Login Name	Time Remaining	Expiration Date	Subscription Type
0 Students selected					

Figure 7.52: Extend Student Accounts

From the **Class Administration**, select **Extend Student Accounts**. This feature allows teachers to efficiently renew student accounts with no action required from the student (Fig. 7.52). After the extension, students can continue to use their accounts without interruption.

7.4.40 Forum

From the **Class Administration** or from the **Class Tools** icon, select **Forum**. The Forum can be used to facilitate meaningful discussions with students in the class. The Forum will have to be enabled the first time the instructor accesses it. To disable the Forum, deselect the option on the **Class Options** page (Sec. 7.4.19).

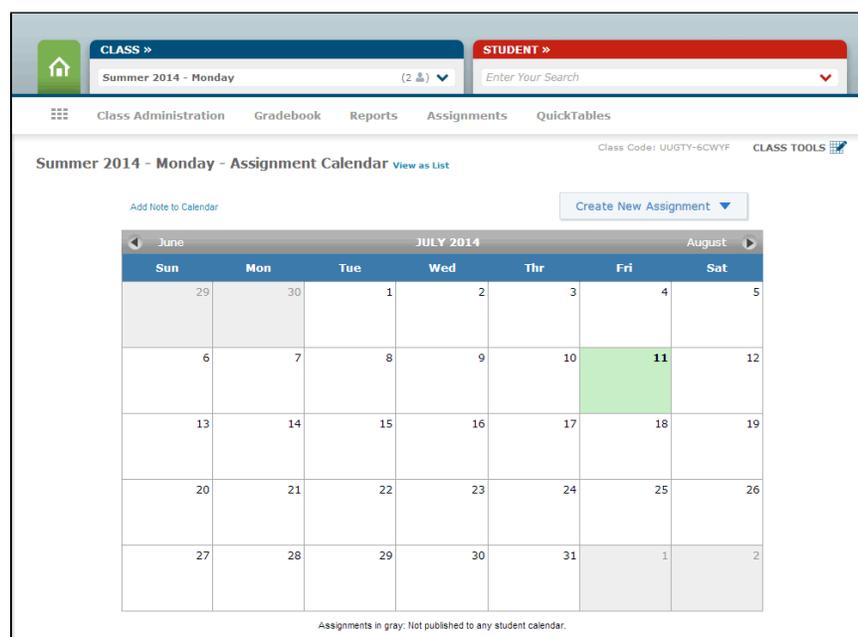


Figure 7.53: Calendar

7.4.41 Calendar

The **Calendar** can be accessed either from the **Class Administration** or from the **Class Tools** icon (Fig. 7.53). Instructors can view and schedule assignments through the Calendar by clicking on the **Create New Assignment** button. Instructors can create a new assignment from the beginning or select **Duplicate from Another Class** to reuse the same content. The Calendar shows all **assignments** in the class, one month at a time, with their start and end dates.

Hovering over either a start date or an end date will highlight the start and end dates for the assignment.

All assignments appearing in the Calendar may be included in the class grading scheme. Assignments do **not** have to be graded, however, to appear in the Calendar. All assignments, graded or not, will appear in the Calendar unless deliberately excluded.

It is also possible to add arbitrary notes to the Calendar by clicking the link, **Add note to Calendar** (upper right).

7.4.42 Student View

The **Student View** can be accessed either from **Class Administration** or from the **Class Tools** icon. The student view can be used to experience exactly what a student experiences in ALEKS. The Student View for an instructor behaves as it would for student: instructors complete the ALEKS tutorial and Initial Assessment, view their

pie chart, enter Learning Mode, and can complete assignments if any have been created and assigned to the class. The Reset the Student View checkbox can be used to reset the Student View to the beginning of the Student Module (i.e. the ALEKS tutorial); this will delete any previous work logged by the instructor in the Student View.

7.4.43 Class Archive

Archiving can be used to simplify the list of classes displayed from the Class tab. Class archiving (and unarchiving) can be done in several ways. Individual classes can be archived from the **Class Summary** page (Sec. 7.4.15), whereas multiple classes can be archived from the **Class List** page (Sec. 7.4.34). Classes can be set to archive automatically after their end date has passed (Sec. 7.4.2).

7.4.44 Class Tools



Figure 7.54: Class Tools

After selecting a class, the Class Tools link will be available in the upper right area of the page (Fig. 7.54). Clicking on this link will display icons for quick access to the following for the current class:

- Forum (Sec. 7.4.40)
- Calendar (Sec. 7.4.41)
- Resources (Sec. 7.4.30)
- Student View (Sec. 7.4.42)

7.5 Assignments

The following kinds of assignments can be created in ALEKS: Pie Progress Goal, Time Goal, Topic Goal, Homework, Tests, Quizzes, and Scheduled Assessments (Fig. 7.55). All are optional: ALEKS can be used without any of these, but they may enhance the

CREATE	MANAGE	REPORTS
<ul style="list-style-type: none"> > New Homework > New Test > New Quiz > New Scheduled Assessment 	<ul style="list-style-type: none"> > Assignment List 	<ul style="list-style-type: none"> > Homework Report > Quiz Report > Test Report > Assessment Report

Figure 7.55: Assignments

effectiveness of ALEKS in certain instructional contexts. Pie Progress Goal, Time Goal, and Topic Goal are similar in setup and will be addressed briefly below. Homework, Tests, and Quizzes are similar in how they are configured. The process of creating a Homework assignment will be described below in full detail; Scheduled Assessments will be treated more briefly, focusing on how they differ from Homework, Quizzes, and Tests.

All assignment types are separate categories in the ALEKS Gradebook (Sec. 7.4.29).

7.5.1 Class Assignments

Name	Type	Start	End	Goal Details	Status	Report
<input type="checkbox"/> Scheduled Assessment 3	Scheduled Assessment	08/17/2016 8:00 am	08/24/2016 8:00 am	-	Upcoming	
<input type="checkbox"/> Test 2	Test	07/25/2016 4:58 pm	08/08/2016 4:58 pm	-	Current	
<input type="checkbox"/> Homework 8	Homework	07/18/2016 4:58 pm	08/01/2016 4:58 pm	-	Current	
<input checked="" type="checkbox"/> Quiz 5	Quiz	07/11/2016 4:58 pm	07/25/2016 4:58 pm	-	Completed	
<input type="checkbox"/> Scheduled Assessment 2	Scheduled Assessment	07/11/2016 8:00 am	07/18/2016 8:00 am	-	Completed	
<input type="checkbox"/> Homework 7	Homework	07/04/2016 4:58 pm	07/18/2016 3:58 pm	-	Completed	

Figure 7.56: Assignment Status

Assignments that have been created for a class can be viewed by clicking on the **Assignments** option. The **Assignments** link will display a table showing all assignments in the class (Fig. 7.56). By default the list is sorted by end date, then the name of the assignment. The list can also be sorted based on other columns as well. The table includes the following information: Assignment Name, Type of assignment, Start Date, End Date, Goal Details, Status of the assignment, and a Report option to display the results of the assignment per student.

Possible Status values are:

Current

The assignment is currently available.

Upcoming

The assignment will be available at a future date.

Completed

The assignment due date has passed.

Disabled

The assignment has been set up as Disabled in Step 1 on the assignment setup screen.

Clicking on the box next to one of the assignments will display a list of **Actions** available for that assignment. Clicking on more than one assignment at a time will limit the actions available.

Available **Actions** are:

Edit

Instructors can modify an existing assignment in the class.

Quick Edit

Instructors can adjust the Assignment Name, Start Date and Time, End Date and Time, and Status.

Print

Instructors can print up to five different instances of this assignment (Homework, Test, or Quiz).

View Report

Instructors can view a report showing each student's result on the assignment.

Duplicate

Instructors can make a duplicate copy of an existing assignment in the current class.

More

Selecting the **More** action will display additional options.

Shift Start and End Dates

Instructors can adjust the selected assignment Start and End Dates forward or backward by a selected number of days.

Set Start and End Dates

Instructors can set the selected assignment start date and time and end date and time.

Delete

Instructors can delete the selected assignment.

STEP 1: Name & Date

Name:

Status: ⓘ

Start Date: Month: Mar, Day: 5, Year: 2015, Time: 4:53 pm

End Date: Month: Mar, Day: 5, Year: 2015, Time: 11:59 pm

Time Limit: 1:30

Allow students to save this assignment for later and go back to Learning Mode.

Publish this Homework to the student calendar

Allow student access to the eBook while doing this Homework

Allow student access to "Worked Example" while working on this Homework

STEP 2: Content

Please select the content for this Homework. You must choose a minimum of 1 question, with a maximum of 60 questions.

Randomly add questions from

Default View | All Assignments | Points

- Prey, Begging, and Chasing for the Queen [open]
- Module #1
- Module #2
- Module #3
- Module #4
- Module #5

Drag questions here

Figure 7.57: New Homework

7.5.2 New Homework

Instructors can create a new Homework assignment by clicking on the **Assignments** tab then the **New Homework** link. (Fig. 7.55). Alternatively, instructors can create a new Homework assignment by using the **Duplicate** option from the Assignment List.

The following steps are needed to complete the assignment creation process (Figs. 7.57 and 7.58):

STEP 1: Name & Date

Basic information about the Homework assignment is entered including a name and the dates when it will be available (Sec. 7.5.3).

STEP 2: Content

In this step content is added to the assignment (Sec. 7.5.4).

STEP 3: Gradebook Settings

Instructors can specify when students can see their grades, or if multiple attempts are permitted for the assignment (Sec. 7.5.5).

STEP 4: Advanced Options

In this step instructors can control student access to the assignment (Sec. 7.5.6).

STEP 5: Grading Scale

A grading scale can be set for the assignment and parameters are available to optionally allow this score to be visible to students (Sec. 7.5.7).

7.5.3 Name & Date

STEP 1. This step allows the instructor to select a name for the assignment and the start date and time and end date and time for the Homework. The Homework will be available to the students during this period. By default, the start date and time is when you begin creating the Homework; the end date and time is 11:59 PM of the same day. This section additionally includes other accessibility parameters that can be selected.

Name

A sequential name for the Homework will be generated (e.g., Homework 1, Homework 2, etc.), or the instructor can choose a name.

Status

Normally, the Homework will be left **Enabled**; if you wish to keep it hidden for the time being, change the Status to **Disabled** using the drop-down menu.

Start Date and End Date

Enter the Start Date and Time and the End Date and Time defining the period when the assignment will be available to students.

Location

If IP addresses are used to restrict access to assignments to within the school, a Location drop-down menu will be available (Sec. 7.9.1).

Time Limit

By default, there is no time limit on a Homework, but one may be assigned.

Allow students to save this assignment for later and go back to Learning Mode

By checking this box, instructors can allow students to start an assignment and then save it to complete later. A **Save for Later** button will be available for students to click when taking the assignment. This will permit students to work in Learning Mode or on other assignments before finishing the assignment. This option is not available for timed assignments.

Publish this Homework to the student calendar

The assignment is normally published to the student calendar, but this can be disabled.

Allow student access to Worked Example while working on this Homework

Instructors have the option to activate the Worked Example for any given homework.

7.5.4 Content

STEP 2. There are several ways to select the topics that the Homework assignment will cover.

Selecting Specific Topics

Using the directory on the left-hand side of the Selector window, select the topics you wish to include, and click on the **Add** button underneath the Selector. Shift and Ctrl can be used for easy selection of multiple topics. If Textbook Integration is used (Sec. 7.4.4) the directory may be organized by the textbook. If Textbook Integration is not used then the topics will be organized using ALEKS's own categories, or the instructor can select to organize the topics by Standard if this option is available. If TREC items were added to the class, there will be an extra folder available that contains prerequisite topics (Sec. 7.4.9).

Select the **All Assignments** tab to create a Homework that contains the same topics used in another Homework, Quiz, or Test.

Selecting Random Topics

Another way to add questions is to specify the number of questions and the chapter from which they are to be taken, then click **Add** above the Selector window. The questions will be chosen at random from the chapter or standard you specify. You can also do this for different sections, then **Shuffle** (randomize) them if desired. The total number of questions on the Homework cannot be less than 1 or greater than 60.

To remove topics from the Homework, select them on the right-hand side and click the **Remove** button. The order of topics can be changed by dragging them in the list, or by selecting them and using the up and down arrows. Or, you can randomize the order by clicking the **Shuffle** button.

Instructors can modify the points assigned to each topic, ranging from 1 point up to 99 points. This allows some topics to be weighted more heavily on the assignment than others.

To see a sample question for a topic, double-click on the name of the topic. This is not the question that your students will see; the actual questions appearing on the assignment will be generated algorithmically at the time the Homework is taken. Each student will see a different question, but it will be equivalent to the sample question in topic and difficulty.

7.5.5 Gradebook Settings

STEP 3. You can choose whether the students will see their scores and grades immediately (default), or only after the end date (Fig. 7.58). Next is a box that can be checked to have ALEKS automatically assign partial credit for multi-part problems on

The screenshot shows two sections of a configuration interface:

STEP 3: Gradebook Settings

- Make grades available to student after due date
- Make grades available to student immediately upon completion
- Have ALEKS automatically assign partial credit for multi-part problems
- This Homework can be taken only once
- This Homework can be taken multiple times

A sub-window is open for the 'This Homework can be taken multiple times' option:

- Maximum number of attempts:
- Full Retake (Students must retake all problems.)
- Quick Retake (Students only retake incorrect problems.)

In the gradebook:

- Record the best score
- Record the final score
- Record the average score

STEP 4: Advanced Options

- Prevent automatic assessments
- Assign to entire class
- Assign to specific student(s)

Assignment Access Options: [Learn more](#)

- Students choose when to start assignment after it is available
 - Require Password [Show Password](#)
10 characters max.
- Students must take assignment as soon as it is available

Figure 7.58: New Homework (cont.)

the Homework. You can also specify whether the assignment may be taken once or multiple times. If you click the option “This Homework can be taken multiple times,” a window will open in which you can select a number of attempts, as well as options for which score should appear in the Gradebook (the best score, the final score, or the average of all attempts). Also, in this window you can choose one of the following retake options:

Full Retake

Students must retake all problems (default).

Quick Retake

Students retake only the problems that were answered incorrectly.

7.5.6 Advanced Options

STEP 4. The **Prevent automatic assessments** option allows you to postpone automatic assessments for up to 7 days prior to the beginning of the assignment (defaults to 2 days). Postponed automatic assessments will occur as soon as the assignment is completed or its end date passes. **Objective completion assessments will only be delayed up until the start date of the assignment. Extensions are not taken into account** (Sec. 7.5.8).

The instructor can choose whether to assign the Homework to the entire class or only to some students in the class (including a single student, or no students). If you click the option for “specific student(s),” you will see a list of the names of students in the class with checkboxes.

NOTE. When an assignment is scheduled for some students, rather than the entire

class, the assignment will be considered extra credit in the ALEKS gradebook. This ensures that the assignment will not hurt any student's grade.

Next, you will be given the choice of how your students will access the Homework assignment. There are two options:

Students choose when to start Homework assignment after it is available

Students have the flexibility to choose when to start the Homework assignment so that they can continue to work in other parts of ALEKS without being forced into the assignment.

Included in this option is the ability to password-protect the Homework assignment, providing more control of when and where the Homework assignment can be taken.

Students must begin the Homework assignment as soon as it is available

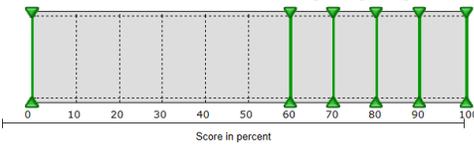
Students are “forced” into the Homework assignment as soon as they log in, once it becomes available. With this option, students will not be able to work in any other areas of ALEKS until they have completed the Homework assignment. See Sec. 7.5.10 for examples of how ALEKS will behave when this option is used.

7.5.7 Grading Scale

STEP 5: Grading Scale

To change the grading scale, drag the green bars to the desired percentages. Type in new grading terms to replace the letter grades, as needed. (As the Homework is completed, results are tallied using blue bars.)

NOTE: To view student grades once this Homework is completed, select the Homework from the gradebook, click on the "View Assignment Gradebook" link, and view the Student Scores report.



Score in percent

Display Options:

- Do not show letter grades on reports
- Show letter grades on instructor reports only
- Show letter grades on instructor and student reports

Apply these settings to all future assignments created in the "Homework" category. (Excludes name, content, and start and end dates)

Figure 7.59: New Homework (cont.)

STEP 5. By default, no grading scale is used, and the students see only a percentage score. If the grading scale is used, its default is a conventional scale (A, B, C, etc.) using standard percentage breakpoints (Fig. 7.59). The sliders on the scale can be moved and renamed, and you can add or remove sliders to set practically any scale desired. The labels on the sliders, which are used as grade notations, are limited to a few letters or

numbers; to set the label, click on the existing label, type in the new label, then press **Return**.

Use the **Display Options** under the grading scale to set whether the scale will be used. Even if the scale is not used, the graph will be populated as a histogram once the students begin taking the Homework, giving a useful illustration of the students' performance on that assignment.

NOTE. You can choose to apply the settings on this screen to all future assignments created in this category, in the class by checking the box underneath the display options. This will not include the name, content, and start and end dates.

To complete the process, click **Save** at the bottom of the New Homework page. After you click the **Save** button, the Homework assignment can be edited if changes are required (Sec. 7.5.8). If you do not wish to save the Homework Assignment, click the **Cancel** button.

7.5.8 Edit Homework

To edit a Homework assignment, click on the Assignment List link. Next, check the box next to the Homework name that you want to edit. Click the **Edit** action to edit the assignment. Homework can be modified up to the moment when the first student begins to take it; extensions can be created at any time.

STEP 1 through **STEP 5** can be edited on this screen. Also, at the bottom of the Edit Homework screen is a **Delete this homework** button. Clicking this button will delete the Homework assignment.

Create Extension. When students are enrolled in a class, the **Create Extension** feature is available on the Edit Homework page. Extensions can be created for one or more students. To create the extension, click on the **Create Extension** button, select the date and time through which the extension will be in effect, choose the student(s) who will be given the extension, and click the **Create Extension** button.

7.5.9 Scheduled Assessments

Scheduled Assessments have many of the same options as Homework, Quizzes, and Tests (Fig. 7.60). The fundamental difference is that you do not specify the content of an assessment; the assessment is produced by ALEKS automatically, as with all other assessments (Sec. 4.1).

Here are some noteworthy features of Scheduled Assessments:

- When creating a Scheduled Assessment, the instructor has a choice between a “Progress”-style assessment and a “Comprehensive”-style assessment. Progress Assessments are slightly shorter and focus on the student's most recent learning history; Comprehensive Assessments are slightly longer and probe more deeply into the student's overall knowledge of the class content.

STEP 1: Name & Date

Scheduled Assessment Name:

Status: ⓘ

Goal: % ⓘ

Scheduled Assessment Type: Progress Assessment ⓘ
 Comprehensive Assessment ⓘ

Scheduled Assessment Dates:

Start Date: Month: Jul, Day: 28, Year: 2016, Time: 10:44 am

End Date: Month: Jul, Day: 28, Year: 2016, Time: 11:59 pm

Publish this Scheduled Assessment to the student calendar.

STEP 2: Advanced Options

Prevent automatic Assessments

Assign to entire class
 Assign to specific student(s)

Assignment Access Options: [Learn more](#)

Students choose when to start assignment after it is available
 Require Password [Show Password](#)
10 characters max.

Students must take assignment as soon as it is available

STEP 3: Grading Scale

Indicate the grading scale to use with this Scheduled Assessment. When choosing a grading scale, please keep in mind the expected mastery for your students on the Scheduled Assessment date. Since ALEKS is a mastery based program, your scale will not follow a traditional scale. You can adjust the categories by dragging the bars from left to right, add or remove categories by dragging the leftmost or rightmost bar.

Display Options:
 Do not show letter grades on reports

Figure 7.60: Add an Assessment

- Scheduled Assessments will not allow access to worked examples, integrated eBooks, or multiple attempts.
- It is helpful to block automatic assessments for a number of days prior to the Scheduled Assessment, using the Prevent automatic assessment option. A Scheduled Assessment will “reset the clock” for automatic assessments, so that the “blocked” assessments do not kick in when the assessment is completed.

Assessments and Grading. The score for all ALEKS assessments, including those scheduled as assignments, is always a percentage representing the student’s knowledge of the entire class contents. Assessments do not measure the students’ knowledge exclusively of a particular chapter, unit, or other portion of the class contents. Many instructors prefer not to use Scheduled Assessment results as part of the grading scheme. If Scheduled Assessments are used for grading the grading scale should be set carefully, to reflect your expectation of what the students will have learned at the time the assessment is taken. For more information on setting a goal percentage for a Scheduled Assessment, see Sec. 7.6.2.

7.5.10 Scheduled Assignment Behaviors

The following are several examples of how the ALEKS system will behave when a student must begin a scheduled assignment as soon as it becomes available in ALEKS.

- If a student is working on any kind of assessment (except Initial Assessment), and a Scheduled Test or Scheduled Quiz becomes available, the system will interrupt the assessment, and the student will be prompted to take the Scheduled Test or Quiz immediately. After the student completes the Scheduled Test or Quiz, the assessment will continue where the student left off.
- If a student is working on any kind of assessment, and a Scheduled Assessment becomes available, the system will stop and **discard the current assessment**. The student will see a message that says the assessment was canceled. The student will be prompted to take the Scheduled Assessment immediately.
- If a student is working on a Homework, Quiz, or Test, and another Homework, Quiz, Test, or Scheduled Assessment becomes available, the system will not interrupt the student's work. The system will wait until the student has completed the current assignment before prompting the student to take the scheduled assignment.

7.5.11 Worksheets

Figure 7.61: Manage Worksheets

Selecting **New Worksheet** lets you create worksheets for the entire class or individual students in the class (Fig. 7.61). Alternatively, you can create worksheets for the class by selecting **Worksheets** and then selecting **in English** or **in Spanish**. On the same page, you can also view worksheets that have been created in the past. You also have the option to create worksheets for an individual student (Sec. 7.8.8). Students also have the ability to print their own worksheets (Sec. 5.6).

For more information about Worksheets, see Sec. 7.4.25.

7.5.12 Pie Mastery, Time, and Topic Categories

The following categories require specific components to be added via the Gradebook Setup Page, to be included in the Gradebook.

New Pie Progress Goal

Name

Due Date/Time

Percent of Pie to be Mastered %

Award Points

Figure 7.62: Pie Mastery Grade Settings

New Time Goal

Type: One Time
 Recurring

Name

Start Date/Time

End Date/Time

Time Spent in ALEKS h m

Award Points

Figure 7.63: Time Grade Settings

New Topic Goal

Type: One Time
 Recurring

Name:

Start Date/Time:

End Date/Time:

Topics Mastered:

Award Points:
 (Choose one)
 All or Nothing
 Partial Credit by Percentage

Figure 7.64: Topic Grade Settings

Pie Mastery

The Pie Mastery category is used to grade students based on their mastery of a percentage of the ALEKS Pie by a specified due date and time (Fig. 7.62).

Time

The Time category is used to grade students based on the amount of minutes/hours spent in ALEKS for a specified date range (Fig. 7.63).

Topic

The Topic category is used to grade students based on the number of topics mastered in the ALEKS Pie for a specified date range (Fig. 7.64).

7.6 Gradebook

The Gradebook records student grades for assignments in the categories selected in the Gradebook Setup. The Gradebook is disabled by default but can be enabled by the instructor for each class.

To enable the Gradebook, do the following:

1. Select a class.
2. From the **Gradebook** sub-navigation, click on **Gradebook Setup**.
3. Click on **Enable the Gradebook for This Class**.

The screenshot shows the Gradebook interface for a class named 'ALEKS' with 27 students. The interface includes a navigation bar with 'Class Administration', 'Gradebook', 'Reports', and 'Assignments'. A 'Gradebook Legend' is visible on the right, defining score types: 'score: Dropped score', '+score: Extra credit', and 'score: Submitted but not due yet (not part of grade)'. The main table displays student names, total grades, and performance across four categories: Time - Week 1, Topic - Week 1, Time - Week 2, and Topic - Week 2, with specific dates for each week.

AI	Students (Name Logout Student ID)	Total Grade	Time - Week 1	Topic - Week 1	Time - Week 2	Topic - Week 2
			Jul 10, 2014	Jul 10, 2014	Jul 17, 2014	Jul 17, 2014
	Alberti, Maria E.	62%	72%	100%	59%	100%
	Anderson, Joel C.	64%	65%	83%	76%	100%
	Bolzano, Carlos	59%	98%	50%	100%	42%
	Browning, Herbert K.	63%	100%	83%	80%	100%
	Chang, Karen V.	58%	93%	83%	78%	83%
	Clark, Tracy L.	63%	93%	100%	54%	100%
	Collins, Jennifer A.	64%	67%	100%	46%	100%
	Fisher, Kelly V.	67%	86%	92%	93%	100%

Figure 7.65: Gradebook

Alternatively, the Gradebook can be enabled from the **Class Summary** page. Once on the **Class Summary** page, locate the **Gradebook** section, and click on **Enable Gradebook**.

The following types of assignment categories can be used by the Gradebook:

- Pie Progress
- Time
- Topics
- Objectives (Chapter Completion)
- Scheduled Assessments
- Quizzes
- Tests
- Homework
- External Assignments

When configuring the Gradebook for a class, the instructor can choose any selection of these assignments. Also, it is possible to use these kinds of assignments and not include them in the Gradebook configuration; for example, the instructor may choose to set up a series of Homework assignments for the class to prepare students for Quizzes or Tests, but not make the Homework assignments part of the grade.

The External Assignment category assignments require specific components (goals or assignments) to be added via the Gradebook Setup page, in order to be included in the gradebook (Secs. 7.5.12 and 7.6.5).

NOTE. The full benefit of the ALEKS Gradebook will be obtained if the configuration is thought out carefully before the beginning of the class, and then left unchanged while the class is in progress. In particular, if the students have begun to complete assignments, and grades for the assignments appear in the Gradebook, changes to the configuration may be confusing to students when they check their Gradebook data.

7.6.1 Gradebook Interface

To see the Gradebook for a class select **Gradebook** from the sub-navigation menu and then select **Class Gradebook** (Fig. 7.65). Several options are available for this display. By default, all gradebook assignment types are displayed, but the **Show** menu allows the gradebook data to be filtered by assignment type. Each assignment is color-coded by category. If student groups have been set up, gradebook data can be filtered by group.

Send Message to Selected Students

Instructors can send a message to students while viewing the Gradebook without having to navigate to the ALEKS Message Center. The default is to sort students by name, but by sorting on a grade column instructors can send messages to groups of students who have high or low values for that column.

Display Options

Grading information may be displayed in terms of points (based on the points allotted for each category in the Gradebook configuration) or by percentage of the total points possible. A date range can also be set for the display. After making any changes to the display, click the **Update Display** button.

Full Screen View

Click on the link to view the Gradebook in an expanded screen.

Download to Excel

As with other reporting displays in ALEKS, the contents of the Gradebook can be downloaded into an Excel spreadsheet for use outside of ALEKS. It is recommended that you download the Gradebook into Excel on a regular basis in order to have a backup file on hand. This can be useful in the event of a discrepancy or if edits need to be made to student scores.

Student Information

Students are listed in the left-hand column; there are also options to show their ALEKS Login Names or student ID numbers instead of names.

Total Grade

The Total Grade column will be displayed when **All** is chosen from the **Show** drop-down menu. This column computes the student's current grade based on assignments completed or for which the due date has passed. This grade predicts the student's grade for the class based on any work completed to date. For example,

if the class is half completed and a student has 70% in this column, it means that if the student's work continues at the same level for the remainder of the class, the final grade will be around 70%. If a particular category (e.g. Quizzes) is chosen rather than **All**, a total grade (Quiz Grade) will be displayed, based only on that category of assignments. If a date range is specified other than the entire period of the class, the display will use only the assignments whose dates fall within that range.

Student Grades

In the Gradebook, student grades for specific assignments are ordered chronologically by due date. As the students complete the assignments, values are inserted into the corresponding cells as follows:

Empty cells

The student has not completed the assignment.

Zero

The due date has passed.

Grey

the student has completed the assignment but the due date has not passed (the value will not be used in computing the current **Total Grade**).

For some types of assignments (e.g., Homework with multiple attempts), students have the option of redoing or retaking the assignment, so that values in grey may change before the due date.

Clicking on the [**Edit**] link in any column, for a specific assignment, will open a box containing options to view and edit student results.

7.6.2 Gradebook Setup

After selecting a class, select **Gradebook** followed by **Gradebook Setup** to access the setup page. **Gradebook Setup** can also be found by selecting **Class Administration** followed by **Class Summary**.

For each of the grading assignment categories, a category weight percentage can be assigned (Fig. 7.66). To include that category in the Gradebook, you must set this percentage greater than 0. The total percentage weight of all categories combined must equal 100%, or an error message will display when attempting to save the Gradebook Setup page.

Assignment Weights

The assignments within each Gradebook category can also have different weights. The weight of each individual assignment can be assigned by clicking on the **Edit** link found below the category name. When you are entering the weight for each assignment, there is a toggle link to **Show or Hide** the details of the weight of each assignment. These details include the percent value of each assignment within the category and the percent value as a component of the total grade (Fig. 7.67).

Gradebook Setup
[View Gradebook](#) [Disable the Gradebook for this Class](#)

Gradebook Category	Category Weight (%)
Pie Progress Edit	13 %
Time Edit	13 %
Topic Edit	13 %
Objective Edit	12 %
Scheduled Assessment Edit	12 %
Quiz Edit	13 %
Test Edit	12 %
Homework Edit	12 %
Gradebook External Assignment Category Add New Row	
External Assignment Edit Name Edit Add External Assignment	0 %
Total: 100 %	

Need a suggestion? The guides below can help you set up a basic weighting system.

[Gradebook Setup Guide](#)

Total Grade Display Settings

Show total grades to students
 Hide total grades from students

Figure 7.66: Gradebook Setup

Gradebook - Homework Weight
[<< Return to Gradebook Setup](#)

Default weight: 10 points Drop the lowest 0 score(s)

Name	Due Date	Extra Credit	Weight	Weight Within Category (%)	Contribution to Total Grade (%)
Homework 1 Edit Student Scores	07/22/2014	<input type="checkbox"/>	10 points	9.1%	0%
Homework 2 Edit Student Scores	07/29/2014	<input checked="" type="checkbox"/>	10 points	9.1%	0%

Figure 7.67: Assignment Weights

Dropping Low Scores

On the assignment weighting page there is a drop-down menu that allows the instructor to specify how many (if any) of the lowest scores will be dropped from the gradebook (Fig. 7.67). Only regular (non-extra credit and non-zero weight) assignments can be dropped. Suppose that 10 ALEKS Quizzes have been set up for the term and the 2 lowest quiz scores have been set to be dropped. ALEKS will not drop any scores until the 9th Quiz has been completed by the students. At that time, the lowest of the 9 scores is determined, and it is dropped when ALEKS computes the overall score for the Quiz category in the Gradebook. When the 10th Quiz has been completed by the students, the 2 lowest of the 10 scores are determined, and they are dropped when ALEKS computes the overall score for the Quiz category in the Gradebook. **ALEKS recommends that you wait until the end of the class to drop the lowest score(s).**

Extra Credit

Also on the assignment weighting page, there is a check box that can be used to designate the assignment as extra credit (Fig. 7.67). Students who do not complete the extra credit assignment will not be penalized. (Students who do complete the assignment can only improve, never hurt, their grades.) Extra credit assignments are differentiated from regular assignments in the gradebook by a + next to the score.

NOTE. In ALEKS, assignments not assigned to the entire class are automatically flagged as Extra Credit. This ensures that the assignment to only some students will not hurt the grades of other students.

Assessments

In the Gradebook, assessments refer only to Scheduled Assessments; results from other assessments cannot be used in the Gradebook (Sec. 4.3).

Each Scheduled Assessment in the class can be assigned a goal percentage. The **Goal** is the percentage of the class that grades on the assessment are based on. For example, midway through the class, the goal for an assessment might be set at 50%. Then, a student who assessed as knowing 40% of the entire class would get a score of 80% on the assessment. (Meeting or exceeding the goal percentage gives a score of 100% for the assessment.)

Disable Gradebook

The Gradebook can be disabled by clicking **Disable the Gradebook for this Class** on the **Gradebook Setup** page. Disabling the Gradebook for the class will hide the class Gradebook from you and the students in the class. The Gradebook can be reactivated at any time by clicking on the link **Enable the Gradebook for this class** link.

Total Grade Display Settings

By default, the option **Show total grades to students** will be selected in this section of the Gradebook setup. If desired, you can elect to hide the total grades from students by selecting **Hide total grades from students**.

7.6.3 Grading Scale for Total Grade

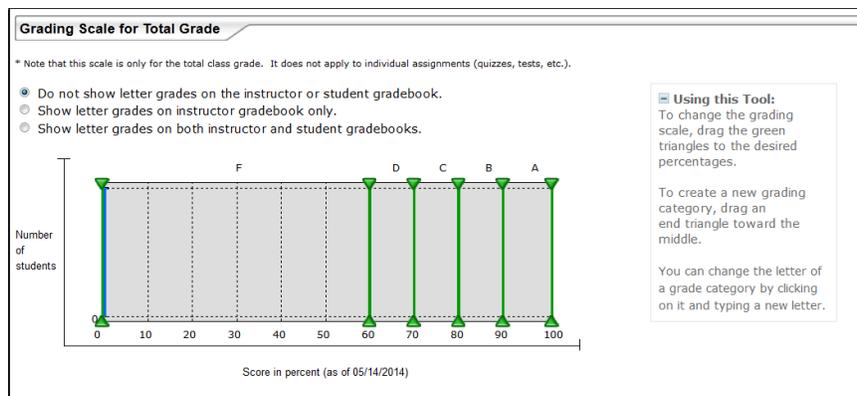


Figure 7.68: Grading Scale for Total Grade

This feature allows the instructor to assign a grading scale for the total class grade (Fig. 7.68). By default, no grading scale is used, and the students see only a percentage score. The default grading scale is a conventional scale (A, B, C, etc.), using standard percentage breakpoints. The sliders on the scale can be moved and renamed, and you can add or remove sliders to set practically any scale desired. The labels on the sliders, which are used as grade notations, are limited to a few letters or numbers; to set the label, click on the existing label, type in the new label, then press your **Enter** key.

Use the options above the grading scale to set whether the scale will be used or not, and who will see it. Even if the scale is not used, the graph will be populated as a histogram, giving a useful illustration of the distribution of students' overall scores.

7.6.4 Chapter or Objective Completion and the Gradebook

Scores for the Objective category will be calculated in one of the following two ways, based on the class setup:

Chapter or Objective completion with End Dates

Each chapter or objective has a due date by which students are expected to complete the material in that unit. If a student completes the chapter or unit before the due date, a grade of 100% is entered into the student's cell for that assignment. The score will appear in grey, and it will not be used to compute the Total Grade until the due date has passed. It is not, however, subject to change; even if the student loses material in a subsequent assessment, the 100% score will remain. If the student does not complete the unit by the due date, the percentage of goal topics that the student did complete will appear in the cell as the student's score. **If multiple objectives have the same end date, they will be treated as a**

single objective, and there will only be one column for these objectives in the gradebook.

Chapter or Objective completion without End Dates

All chapters or objectives have a single end date by which students are expected to master all objectives. This feature includes a mastery level completion percentage for the objectives. The mastery level completion defaults to 90% but can be adjusted. Students must master this percentage of the topics in an objective before they can advance to the next objective. The student's score is entered into the student's cell for that assignment and will appear in grey until after the end date has passed. When students meet the mastery level they will be moved to the next objective and will be able to access the remaining unmastered topics from all previous objectives. The **Total Grade** column will not include the chapter or objective assignment score until after the end date for the class has passed (Sec. 7.4.6).

Students using ALEKS have access to Gradebook information for their own work, similar to the information described in this chapter.

7.6.5 External Assignments

PreCalculus - Gradebook - Edit External Assignment

[<< Return to External Assignment Weights](#)

External Assignment Category:

Assignment Name:

Assignment Date: Month Day Year

Maximum Score: points

Student Name	Score
1. Bunton, Fiona	<input type="text"/> /10
2. Robbins, James	<input type="text"/> /10

Figure 7.69: External Assignment Setup

The External Assignment feature is ideal for including student scores on assignments or

exams completed outside of ALEKS. These assignments must be added to the Gradebook in the Gradebook Setup page.

External Assignments can be created in **Gradebook Setup** as follows (Fig. 7.69):

1. Click on **Add External Assignment** in the External Assignment Category.
2. Enter the name of the assignment.
3. Adjust the assignment date if necessary.
4. Assign a maximum score.
5. Click on the **Set Maximum Score** button.
6. Enter student scores either by typing or paste from a spreadsheet and click **Save**.

Instead of recording all non-ALEKS assignments in the catch-all **External Assignments** category with a single weighting, you can create an unlimited number of External Assignment categories, each with its own weight. New External Assignment categories can be created in **Gradebook Setup** as follows:

1. Click on the **Add New Row** link in the Gradebook External Assignment Category.
2. Enter a name for the category.
3. Assign an overall weight to the category and click **Save**.

If you wish to delete an external assignment category, either delete any assignments in the category, or set the category weight to zero.

7.6.6 Adjust Student Scores

Instructors can adjust student scores for ALEKS assignments and external assignments directly through the Gradebook, as follows:

1. Click on **Class Gradebook**.
2. Click on **Edit** for the assignment you want to adjust.
3. Click on **Edit Student Scores**.
4. Edit the scores as necessary.
5. Click the **Save** button.

7.6.7 Gradebook Log

From the class **Gradebook** sub-navigation, select **Gradebook Log** to access this feature (Fig. 7.65). The Gradebook Log is a record of any adjustments made to student scores in the ALEKS Gradebook. Adjustments may be made to Gradebook scores

by you, the primary instructor, teaching assistants, or other instructors who have edit privileges for the class Gradebook. This feature can also be used to monitor adjustments made to the Gradebook by anyone with Share Class Access (Sec. 7.4.32).

7.7 QuickTables

This menu allows instructors to manage their QuickTables settings, and QuickTables-related features including creating tables, assessments, worksheets, quizzes, and viewing reports. For full details about QuickTables, see Chap. 6.

7.8 Student Administration

Student Administration allows the instructor to manage individual student accounts and progress. Selecting a student account will display the student-related menus and actions in the sub-navigation.

7.8.1 Account Summary

The screenshot displays the 'Kelly Trish - Account Summary' page. It is organized into several sections:

- Student Information**: Includes fields for First Name (Kelly), Middle Initial (T.), Last Name (Trish), Student ID (236545), Email (-), and Login Name (XXXXXX). An 'Edit' link is present.
- Account Settings**: Shows 'Account Status: Enabled' with an 'Edit' link.
- Account Status**: Displays 'Last Login: 07/21/2016', 'Creation Date: 04/22/2016', 'Enrollment Date: 04/22/2016', and 'Expiration Date: -'.
- Parent/Guardian Contact Information**: Contains a yellow warning box with a triangle icon and the text 'Please complete this section.' and an 'Edit' link.
- Student Groups**: Shows 'No Groups'.

Figure 7.70: Student Account Summary

Student **Account Summary** allows instructors to make corrections or changes to a student's name, email address, ID, password, and account status (Fig. 7.70). For each student, instructors can add a parent/guardian contact information. In addition, instructors can view Student Groups and Share Class Access information (Sec. 7.4.32). To edit a student's account preferences, click **Edit** next to the corresponding category.

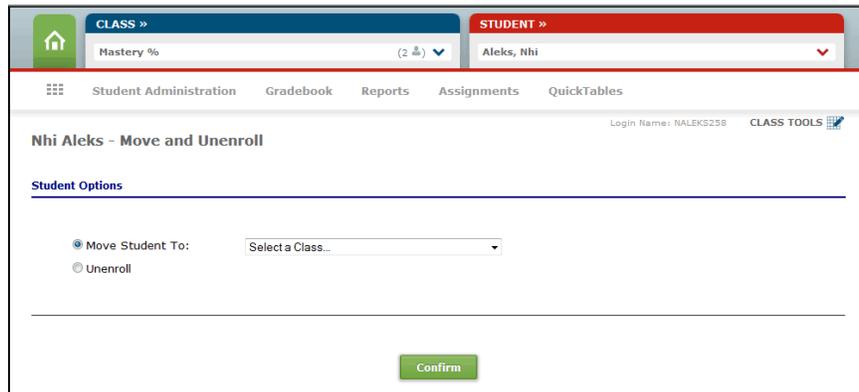


Figure 7.71: Move and Unenroll Student

7.8.2 Move and Unenroll Student

Selecting a student account and clicking on **Student Administration** displays **Move/Unenroll** (Fig. 7.71). This feature allows you to move or unenroll the selected student from the class.

Move Student

To move a student from the current class to another class:

1. Select **Move Student To:**.
2. Use the drop-down menu to select a new class.
3. Click on **Confirm** to save your action.

Unenroll Student

To unenroll a student from the current class:

1. Select **Unenroll**.
2. click on **Confirm** to save your action.

To move or unenroll multiple students at once, see Sec. 7.4.36.

NOTE. See Sec. 7.4.31 for more information on what happens to students' records when they are moved to a new class.

7.8.3 Student Cleanup Tool

Selecting a student account and clicking on **Student Administration** displays **Cleanup Tool**. This feature allows you to clear statistics for an individual student. For the class level Cleanup Tool, see Sec. 7.4.35.

7.8.4 Student Gradebook

Selecting a student account and clicking on **Gradebook** displays the following information:

- Student Gradebook information
- Class Gradebook (Sec. 7.4.29)

7.8.5 Student Reports

Selecting a student account and clicking on **Reports** displays the following information:

- ALEKS Pie (Sec. 7.3.8)
- Progress (Sec. 7.3.18)
- Time & Topic (Sec. 7.3.21)
- Knowledge Per Slice (Sec. 7.3.22)
- Assignments (Sec. 7.3.23)
- Objective (Sec. 7.3.11)
- Time Line
- State Standards (Sec. 7.3.26)
- QuickTables (Sec. 6.3)

All reports listed here are links to other parts of the Instructor Module.

7.8.6 Student Assignments

Selecting a student account and clicking on **Assignments** displays the following options (Fig. 7.72):

- Edit Extensions (Sec. 7.8.7)
- Worksheet (Sec. 7.8.8)
- Class Assignments (Sec. 7.5.1)
- Request Assessment (Sec. 7.8.9)
- Cancel Assessment (Sec. 7.8.10)

Please see each section referenced for more details.

7.8.7 Edit Extensions

Selecting a student account and clicking on **Assignments** displays **Edit Extensions**. Instructors can give individual students extensions for class objectives and Assignments, which includes Scheduled Assessments, Homeworks, Tests, and Quizzes.

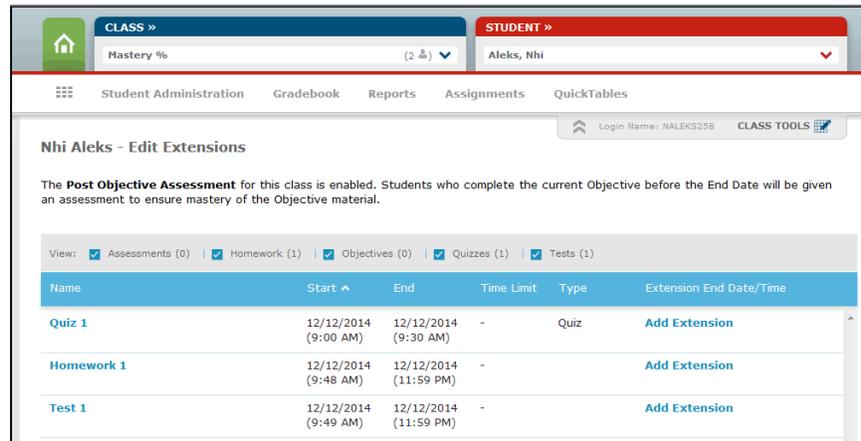


Figure 7.72: Edit Extensions

7.8.8 Student Worksheets

Selecting a student account and clicking on **Assignments** displays **Worksheet**. You can create a new worksheet or view previously created worksheets for the student. For a description of the Worksheets feature, see Sec. 7.4.25.

7.8.9 Request Assessment

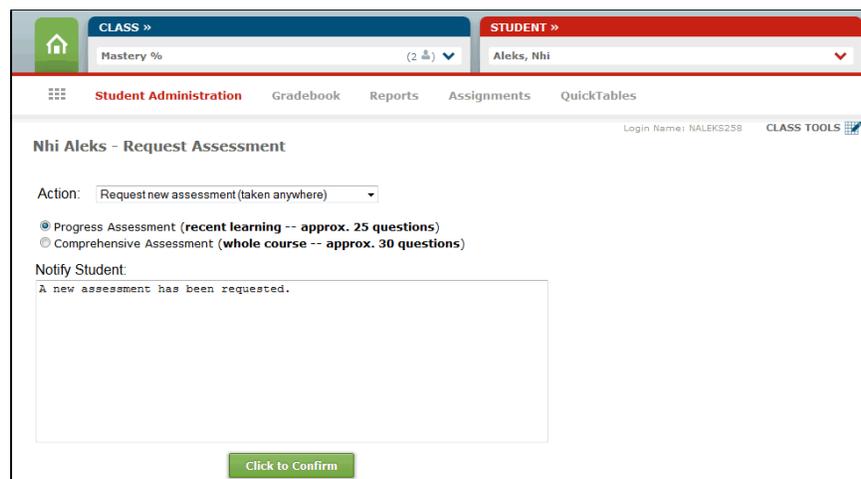


Figure 7.73: Request Assessment

Selecting a student account and clicking on **Assignments** displays **Request Assessment** (Fig. 7.73). This feature allows you to request a "Progress"-style assessment or a "Comprehensive"-style assessment for a single student, effective immediately. Via the

drop-down Action menu, you can choose between **Request new assessment (taken in Institution only)** or **Request new assessment (taken anywhere)**. If your school has IP addresses in place at the school level, you can restrict the assessment to be taken on campus by selecting the option marked "Institution Only." The comment box allows the instructor to type a message that the student will see when they log in to take the assessment.

7.8.10 Cancel Current Assessment

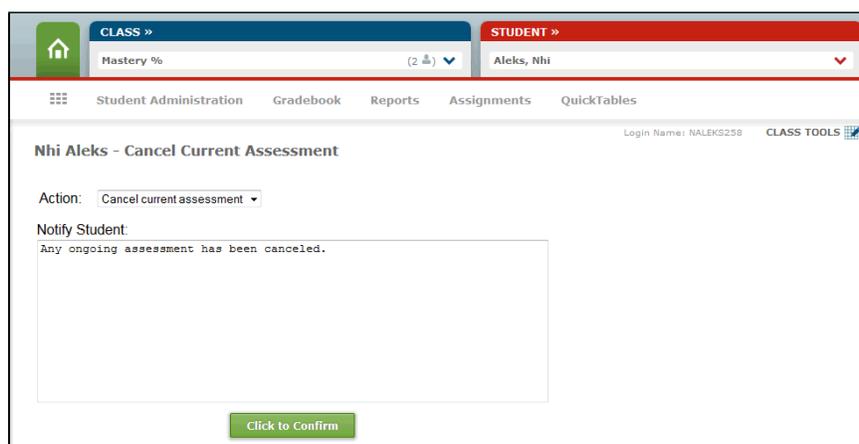


Figure 7.74: Cancel Current Assessment

Selecting a student account and clicking on **Assignments** displays **Cancel Current Assessment** (Fig. 7.74). This feature allows you to cancel any current or pending assessment for the student, until midnight of that day. An automatic reassessment that is cancelled in this way will become active again on the following day.

7.8.11 Student QuickTables

Selecting a student account and clicking on **QuickTables** displays the following options:

- Worksheets (Sec. 7.8.12)
- Progress Report (Sec. 6.3.1)
- Quiz Report (Sec. 6.3.2)

Please see each section referenced for more details.

7.8.12 Student QuickTables Worksheet

Selecting a student, clicking on **QuickTables**, and then **Worksheet** displays the following options:

- Select a table from the list (if tables have been created) to create a QuickTables Worksheet for that student.
- View a previously created Worksheet for that student.

7.9 Administrator Features

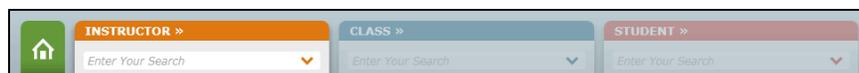


Figure 7.75: Three levels of hierarchy

ALEKS administrators have access to three account levels: instructor, class, and student (Fig. 7.75). This section will focus on the Instructor level. The class and student levels are described earlier in detail (Sec. 7.1.2). Administrators begin with the **INSTRUCTOR** tab on the far left and then can make selections in the succeeding tabs until the desired level is reached. To move between levels, they need to click on the tab they want to make active again. Features from this menu allow administrators to perform actions such as updating their institution’s settings, creating new instructor accounts, and managing all classes and instructors at the institution, creating Master Templates, managing subscriptions, and other features.

7.9.1 Institution Account Summary

Selecting **Institution Administration** and clicking **Account Summary** displays the following options:

Account Information

Administrators can modify the state and time zone settings for the institution under the Account Information section. Usually, these are set correctly when the institution account is first created and do not need to be changed. The institution and billing address can also be modified in this section.

Important Contacts

Administrators can add important contacts such as the school’s Billing Contact, Technical Contact, Implementation Specialist, and Course Product/Feature Upgrade Contact under this section.

Settings

The Institution Network Information section allows you to enter an IP range or Internet Protocol for the computers in your institution. They will be used if you wish to restrict student access to assessments, Homeworks, Quizzes or Tests to the campus network (Sec. 7.5.3). Single IP School Assignment will require students to complete all assessments from the same IP address where they began them. This reduces the flexibility of access that students usually have to their ALEKS accounts, but in some cases it may be desired. Administrators can select to **Show student passwords on the Class Roster** and **Show Cartoon** under Institution Settings.

Incoming & Exiting

The Incoming and Exiting Student Options allow you to select whether incoming students from a class within the same course family or same course product should pick up where they left off or start fresh with a new Initial Assessment. See Sec. 7.4.31 for more information about this option.

Administrators and Instructors

Administrators can view a list of administrators and instructors under this section. All accounts are regular instructor account types unless they include one of these labels: (A) for Administrator or (TA) for Teaching Assistant. There is a link to the Admin/Instructor Roster under this section.

7.9.2 Schedule Domain Upgrade

ALEKS Corporation periodically releases new versions of its class products. When this occurs, there is an announcement to users explaining the nature of the upgrade, window of time during which users may upgrade, and the default date on which the upgrade will occur if no action is taken. If the school wishes to schedule the upgrade earlier than the default date, the administrator can use this tool to select the desired date.

NOTE. If an update is available, the changes in the upgrade will be described in detail on this page. **Schedule Domain Upgrade** can be found under Institution Administration on the main page.

7.9.3 Instructor Roster

Administrators can view a roster for all instructors at the school by selecting **Instructor Roster** from **Institution Administration**. The Instructor Roster displays detailed instructor information (Fig. 7.76). The roster can be used to manage other instructor's account settings, including permission levels, viewing dashboards, sending messages, and archiving or deleting accounts. Multiple instructor accounts can be updated at the same time through the Instructor Roster, and individual instructor accounts can be edited through each instructor's Account Settings from their Account Summary. There are features in the Instructor Module that can be used to manage ALEKS subscriptions,

The screenshot shows the 'Instructor Roster' interface. At the top, it indicates '0 accounts selected' and 'Displaying 4 accounts'. Below this, there are filters for 'View: Active (4) | Archived (0)', 'Instructor (2) | Admin (1) | TA (1)', and a 'Download' button. A 'New Instructor' button is also present. The main table has a header row with columns: Name, Account Type, Authorize, Enroll/Pre-reg., Batch Register, Alternate Sub. Len., Extend Accounts, Student History, Last Login, and Creation Date. The table contains four rows of instructor data.

<input type="checkbox"/>	Name ^	Account Type	Authorize	Enroll/Pre-reg.	Batch Register	Alternate Sub. Len.	Extend Accounts	Student History	Last Login	Creation Date
<input type="checkbox"/>	Blossom, Cherry, Ms.	Admin	✓	✓	✓	✓	✓	✓	04/10/15 04:08 PM	03/26/2014
<input type="checkbox"/>	Cone, Piney, Ms.	Instructor	✓	✓			✓	✓	04/17/15 04:34 PM	03/21/2014
<input type="checkbox"/>	Jackson, Jennhi, Ms.	Instructor	✓	✓			✓	✓	07/10/14 02:02 PM	06/24/2014
<input type="checkbox"/>	Magnolia, White, Ms.	TA							04/21/14 05:25 PM	04/21/2014

Figure 7.76: Instructor Roster

register students, and manage student accounts. Some features consume purchased ALEKS subscriptions; therefore, administrators can limit instructors' access to these features by enabling or disabling permissions per Instructor. Edit Multiple Permissions can be done from the Instructor Roster under Institution Administration. To edit a specific instructors's permissions, select the instructors's account summary.

NOTE. Archiving can be used to simplify the Instructor Roster so that only current instructors appear in the roster. Archived accounts can be accessed and un-archived at any time; archiving does not impact the instructors' ability to access their accounts.

7.9.4 Create New Instructor Account

Frequently, instructor accounts are created by ALEKS Corporation for the school. Administrators, however, are able to create them independently by selecting **Institution Administration** and clicking **New Instructor**. Note that new instructors may be set up with administrator privileges.

7.9.5 Subscription Management System

Administrators can monitor the number of available subscriptions for student registration. When subscriptions are purchased at the district level, the Administrator can move subscriptions between institutions, put subscriptions on hold, or move subscriptions from one institution to another for their districts and schools through the Subscription Management System (SMS). District administrators will see subscriptions for the district and for schools within the district.

Using the SMS system, school administrators can put subscriptions on hold at their school. School administrators will see only the subscriptions for their school. To access the SMS, the school administrator clicks **Subscriptions**, and then clicks on **Subscription Management**.

There are three tabs in the SMS:

Subscription Management

The subscription information will be displayed for the district or school. This includes the subscriptions type or length and whether the subscriptions are “Usable Now” or “On hold.”

Orders

The Orders tab displays a detailed history of the ALEKS subscriptions purchased at the school or district. The information includes the purchase date, invoice number, subscription type, quota purchased, number used, and number remaining. At the bottom of the screen is a link that administrators can use to send an Excel document to their ALEKS Message Center inbox containing a list of subscriptions used within a specified date range. There is also an option to exclude expired subscriptions from the report.

Activity Log

The Activity Log tab displays the history of subscription movements and holds performed via the Subscription Management tab. Each entry contains detailed information about the action.

7.9.6 Batch Registration

By selecting **Subscriptions** and clicking **Batch Registration**, administrators can quickly create multiple classes and student accounts and register up to 10,000 students at once (See Sec. 3.8). This feature will help administrators to significantly reduce the amount of time they spend registering large numbers of students across many classes. ALEKS will generate new classes and accounts for new teachers and students and register the students in the appropriate classes. A confirmation email will be sent to the administrator and teachers that includes the login names and passwords for the registered students.

NOTE. Only authorized administrators should use Batch Registration. Batch Registration is designed to register large numbers of students and will consume corresponding quantities of ALEKS subscriptions.

7.9.7 Authorize Student Account

When students self-register into classes, this feature allows instructors to authorize the students' registrations in their own classes so that they can begin using ALEKS (See Sec. 3.6). By selecting **Subscriptions** and clicking on **Authorize Student**, administrators can authorize all students at their institution.

7.9.8 Pre-Registration with alternative subscription length

The Enroll/Pre-Register feature allows instructors to register a group of students at the same time for a single class (Sec. 3.7). Students do not need to self-register when instructors use the pre-registration feature. Instructors that have been given permission to the Alternate Subscription Length have additional options to register students using the subscription length assigned to the class or to assign a different subscription length.

7.9.9 Extend Student Accounts

By selecting **Subscriptions** and clicking **Extend Student Accounts**, instructors can efficiently renew student accounts with no action required from students. After the extension, students can continue to use their accounts without interruption.

7.9.10 Administrative Reports

There are a variety of reports available to administrators. These reports help monitor the institution's progress in terms of student and class performance across applicable standards. To access the reports, click on **Reports** and then select a report.

Custom Reports

Is a powerful tool that can help administrators gather important metrics to show how institutions, instructors, and classes are performing in comparison with each other. To access the report, make a selection in each tab until the level of the desired report is reached, click **Reports**, and then click **Custom Reports**. See Sec. 7.3.29 for more details about this feature.

Enrollment/Activity

Shows the total number of students ever enrolled in ALEKS at the institution, and the numbers of students active in the system during the last week, the last month, and the last three months (optionally 12 months). For each of these intervals, it also shows the average number of hours spent weekly by the students who were active in ALEKS.

Class Activity

Shows the number of students who worked in ALEKS or QuickTables each month and the average hours worked each week.

State Standard Report

Details student performance against applicable standards, for all students at the school who have taken an Initial Assessment between specified dates. Additional selection criteria are Mastery Criterion, the percentage used by ALEKS to determine that a standard has been mastered, and the "Hours cut off," the amount of time used to compare two groups of students. For example, if the "Hours cut off" is set to 30 hours, the performance of students who have used ALEKS for less

than 30 hours will be compared with that of students who have used ALEKS for at least 30 hours.

Average Progress Report

Is a more detailed view of campus activity. For each instructor and course, it shows the total number of students ever enrolled, then, for each of the last six full months, the number of students active and the average hours per week spent by active students. (Note that the current month does not appear in this report.)

Server Stats: Page Hits

Presents a graph of page hits over time by users of ALEKS at the school. The “Data Range” menu can be used to set the time period that is graphed. Beneath the graph a range of summary statistics may appear, depending on the time span chosen.

Server Stats: User Hour

Is similar to the “Server Stats: Page Hits” report, but graphs the number of user-hours over time.

7.9.11 Student Roster (Institution Level)

Name	Class	Instructor	Login	ID	Enrolled	Expires	Last Login
Alaks, Nhi	Mastery %	Sharp	NALAKS	-	12/11/14	12/28/14	12/11/14 4:59 PM
Aleks, Nhi	Mastery %	Sharp	NALEKS258	-	12/11/14	12/28/14	12/11/14 4:44 PM
Dall, Barbie	Mastery %	Sharp	BDALL	-	10/31/14	01/26/15	11/18/14 4:34 PM
Dimpy, Apple	Mastery %	Sharp	ADIMPY	-	08/25/14	01/08/15	08/25/14 2:13 PM
Foss, Nhia	Mastery %	Sharp	NFOSS15	-	10/17/14	01/02/15	10/27/14 4:24 PM

Figure 7.77: Student Roster (Institution Level)

Administrators can view a roster for all students at the school by selecting **Student Roster** from the **Institution Administration**. This default roster setting shows all active classes that students are currently enrolled in (Fig. 7.77). If students have more than one ALEKS class, their classes are grouped under the Class column. Select the “Plus” icon to see more rows.

Administrators can use the following filters to display various groups of students in the roster:

Enrolled

Displays students who are currently enrolled.

Unenrolled

Displays students who are currently unenrolled.

Valid Subscription

Displays students with a valid ALEKS subscription.

Expired

Displays students with an expired ALEKS subscription.

For information about student roster at the Instructor level and Class Roster, see Secs. 7.2.9 and 7.4.36.

7.10 Master Templates

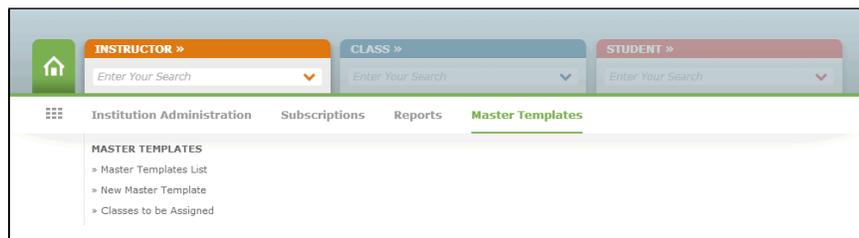


Figure 7.78: Master Template Sub-Navigation

The Master Templates are one of the most powerful features in ALEKS. They provide an efficient way to create and control class instances based on a master class (Fig. 7.78). Instructors who have administrator privileges can create a Master Template, add assignments, and create any number of linked classes based on the Master Template. Instructors teaching the linked classes can edit their individual class settings and assignments and add their own assignments (unless “Lockout” is used; see Sec. 7.10.5). Changes made subsequently to the Master Template will propagate to the linked classes, overriding previous settings as well as any changes made by individual instructors.

7.10.1 Master Templates List

The Master Templates List displays all Master Templates at the institution. When one or more Master Templates are selected, the following actions may become available:

- New Master Template (Sec. 7.10.2)
- Master Template (Class Summary) (Sec. 7.10.4)
- Duplicate (Sec. 7.10.10)
- Archive (Sec. 7.10.11)
- Delete (Sec. 7.10.12)
- Reports (Sec. 7.10.13)

7.10.2 Getting Started

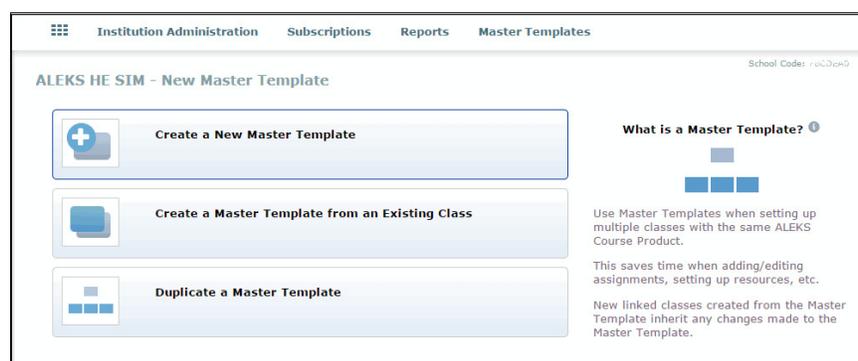


Figure 7.79: New Master Template

Selecting **New Master Template** displays the following options (Fig. 7.79):

Create a New Master Template

This option allows you to customize your own class settings and assignments. Select this option to go through the Master Template creation wizard (Sec. 7.10.3).

Create a Master Template from an Existing Class

This timesaving option allows you to copy all class settings and assignments from an existing class into the new Master Template (Sec. 7.10.9).

Duplicate a Master Template

This timesaving option allows you to copy all class settings and assignments from an existing Master Template into a new one (Sec. 7.10.10).

After the Master Template is created, administrators can view it under the the Master Templates List.

7.10.3 Master Template Basic Settings

Clicking on **Create a New Master Template** displays the following basic settings:

Master Template Basic Information

- Select the ALEKS Course Product for the template. The ALEKS Course Product should not be changed after the class has begun, as doing so will be disruptive to the students' learning and to the class reports and records.
- Select a **Grade**.
- The Master Template is required to have a name; this name can be the name appearing in your institution's class catalogue or anything else you wish. The Master Template name will be a part of the linked classes' names.
- Class Dates are used to configure the Class Calendar, and should include the entire period of time that the students will be using ALEKS. All linked classes created with this Master Template will have the same Start and End dates. The option to automatically archive the Master Template is also available in this step.
- Choose a **Subscription Length**.

QuickTables

QuickTables may be added to the template during this step or at a later time. For complete details about QuickTables, see Chapter 6.

Class Specific Settings

These are specific settings that apply to this class template, such as providing ALEKS graphing calculator functionality.

To edit the Master Template Basic Information and Course Specific Settings sections at a later time, select **Master Template List**, select the desired Master Template, and then select **Class Summary**, followed by **Edit** next to the Master Template Information section.

Administrators will click **Create Master Template Now** to generate the template.

On the page that follows, Administrators have the following choices:

- **Continue to Master Template Summary** (Sec. 7.10.4) to view setup details; or select
- **Customize This Master Template** to set objectives, edit content, or integrate a textbook. For complete details, see Secs. 7.4.4 and 7.4.5.

7.10.4 Master Template (Class Summary)

The Master Template Summary displays all settings and options for the template. Administrators can view and edit any section by selecting **Edit**.

The available options are:

- Master Template Information (Sec. 7.10.3)
- Syllabus (Sec. 7.4.16)

- Standards (Sec. 7.4.17)
- Class Content (Sec. 7.4.18)
- Class Options (Sec. 7.4.19)
- QuickTables Settings (Sec. 7.4.26 and Chap. 6)
- Implementation Information (Sec. 7.4.27)
- Resources (Sec. 7.4.30)
- Lockout Options (Sec. 7.10.5)
- Gradebook (Sec. 7.4.29)
- Assignments (Sec. 7.10.6)
- Linked Classes (Secs. 7.10.7 and 7.10.8)
- Incoming and Exiting (Sec. 7.4.31)

7.10.5 Lockout Options

This feature allows administrators to prevent instructors from editing the class content or assignments in classes linked to the Master Template.

Class Content

If this option is selected, instructors of linked classes cannot edit the class content for their linked classes. Additionally, if administrators use textbook integration or objectives with the Master Template, instructors of linked classes can edit the due dates for each objective, but not edit the content within an objective.

Assignments

If this option is selected, instructors of linked classes cannot edit or delete their assignments linked to the Master Template. They can adjust the dates for these assignments and also create additional assignments for the linked classes.

Incoming and Exiting Student Options

If this option is selected, instructors of linked classes cannot edit Incoming and Exiting Student Options.

7.10.6 Create Assignments in Master Template

To create assignments in a Master Template:

1. In the **Master Templates List**, click on the name of the template to view the Master Template Summary. Alternatively, you can check the box next to the template and then click **Class Summary**.
2. Locate the **Assignments** section, and click **Edit**.

Summer - Create Assignments Introduction

All assignments created in the Master Template will be copied into each linked class. Instructors have the option of adding or editing assignments within their individual class.

Select if you want to create a new assignment or duplicate an existing assignment

Create a new assignment
 Duplicate an existing assignment

Select the assignment type

Homework
 Quiz
 Test
 ALEKS Assessment

Click on "Create Assignments" to start.

[Create Assignments](#) Or [View Master Template Summary](#)

Figure 7.80: Create Assignments in Master Template

At the **Create Assignments Introduction** page, you will see two options for creating an assignment (Fig. 7.80):

Create a new assignment

This option takes you through the ALEKS assignment creation process (Sec. 7.5.2).

Duplicate an existing assignment

This option allows you to duplicate an existing assignment (Sec. 7.5.1).

Select the assignment type that you wish to create or duplicate: Homework, Quiz, Test, or ALEKS Assessment.

After creating assignments, you will see an Assignment list with the assignments created in the Master Template. You will also have options to modify or add additional assignments on this page. For more complete details about the Assignments List, see Sec. 7.5.1.

NOTE. If administrators want to create External assignments in the Master Template, they can do this from the **Gradebook Setup** page. Only the assignment name and date can be set at the Master Template level; the students' grades and maximum point values are set at the linked class level.

7.10.7 Create Linked Classes

After you have defined the Master Template settings, content, and created assignments, you can create linked classes and assign instructors to these classes (Fig. 7.81). A linked class contains the same content and settings as the Master Template. Both the administrator and the instructor assigned to the class will receive a message in their ALEKS Message Center containing important information about the linked classes.

To add linked classes:

Figure 7.81: Create Linked Classes

1. In the **Master Templates List**, click on the name of the template to view the Master Template Summary. Alternatively, you can check the box next to the template and then click **Class Summary**.
2. Locate the **Linked Classes** section and click **Edit**.

On the **Create Linked Classes** page, enter the name of the Class CRN/Section and assign an instructor to the individual linked class. (The name of the linked class will consist of the name of the template plus the name of the CRN/Section.) There are three options for the “Instructor” field:

Existing ALEKS Instructor

Select this option and then use the drop-down menu to select the name of the Instructor teaching the linked class.

Instructor to be announced (TBA)

Select this option if the name of the instructor is unknown. The linked class can be assigned to an instructor at a later time (Sec. 7.10.8).

Create a new Instructor

Select this option if the instructor does not have an existing ALEKS account. Enter the title, first and last names, and e-mail address of the instructor teaching the linked class. ALEKS will send an email message containing login information to the instructor. If an email address is not provided, the administrator will need to edit the instructor account, change the password, and send it to the instructor at a later time (Sec. 7.2.1).

A maximum of 15 linked classes can be created at a time. To add more linked classes, repeat the steps.

Once saved, you will receive a confirmation and arrive at the Linked Class List page with the linked classes that have been created. You can create another linked class by selecting **New Linked Class**, edit the linked classes by clicking on the CRN/Section name of each class, or complete the Master Template set-up process by clicking **I am done creating linked classes**.

NOTE. There is no limit on the number of linked classes you can associate with a Master Template. The interface allows you to link up to 15 at a time: to add more than 15 linked classes, just return to the Master Template Summary page, locate the Linked Classes section, and select **Edit**. On the Linked Class List page, select **New Linked Class**.

7.10.8 Classes to be Assigned

Class	Product	Instructor	Enrollment	Class Code
<input type="checkbox"/> Summer - Sec. 3	...	Classes to be assigned (no instructor)	0	CQWQJ INFTJ
<input type="checkbox"/> Summer - Sec. 4	...	Classes to be assigned (no instructor)	0	TJWET INQ46

Figure 7.82: Classes to be Assigned

The **Classes to be Assigned** page contains linked classes that were set to “Instructor to be announced (TBA)” (Fig. 7.82).

To assign a linked class to an instructor:

1. From the **Master Templates** sub-navigation, select **Classes to be Assigned**.
2. Check the box next to the name of the linked class that needs an instructor.
3. Click **Move**.
4. Select the instructor who is going to teach the class.
5. Click **Apply**.
6. Click **Confirm**.

Once a linked class has been assigned, the instructor assigned to the class will receive a message about the new class information in their ALEKS Message Center. The Master Template name will be part of the linked Class Name; instructors can view this information or edit the information by clicking on **Class Summary**.

7.10.9 Create a Master Template from an Existing Class

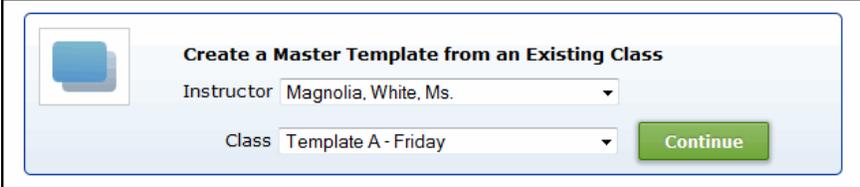
A screenshot of a web form titled "Create a Master Template from an Existing Class". The form has a light blue background and a white border. On the left, there is a small icon of a blue folder. To the right of the icon, the title "Create a Master Template from an Existing Class" is displayed in bold. Below the title, there are two dropdown menus. The first is labeled "Instructor" and has "Magnolia, White, Ms." selected. The second is labeled "Class" and has "Template A - Friday" selected. To the right of the "Class" dropdown is a green button with the text "Continue" in white.

Figure 7.83: Create a Master Template from an Existing Class

After selecting **Create a Master Template from an Existing Class**, use the drop-down menu to select an instructor and a class. Then, click on **Continue** (Fig. 7.83).

On the page that follows, fill in the new Master Template information, including Name, Start Date/End Date, and Subscription Length. At this time, you also have the option to select the settings you wish to copy into the new Master Template. Click **Save** to create the template.

If there are assignments in the previous template, you will arrive at the **Edit Due Dates** page to adjust the start and end dates to correspond to your new Master Template or select **Continue to Master Template Summary**.

7.10.10 Duplicate a Master Template

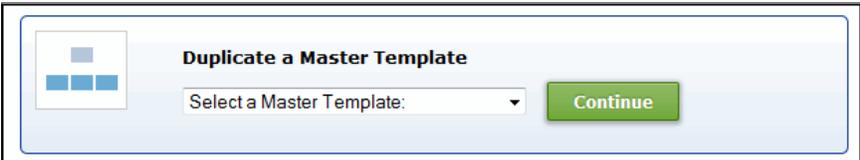
A screenshot of a web form titled "Duplicate a Master Template". The form has a light blue background and a white border. On the left, there is a small icon of a blue folder. To the right of the icon, the title "Duplicate a Master Template" is displayed in bold. Below the title, there is a dropdown menu labeled "Select a Master Template:". To the right of the dropdown menu is a green button with the text "Continue" in white.

Figure 7.84: Duplicate a Master Template

After selecting **Duplicate a Master Template**, use the drop-down menu to select a Master Template, and click **Continue** (Fig. 7.84).

On the page that follows, fill in the new Master Template information, including Name, Start Date/End Date, and Subscription Length. At this time, you also have the option to select the settings you wish to copy into the new Master Template. Click **Save** to create the template.

If there are assignments in the previous template, you will arrive at the **Edit Due Dates** page to adjust the start and end dates to correspond to your new Master Template or select **Continue to Master Template Summary**.

Duplicating a Master Template does not copy the linked sections (nor would you generally want to). Administrators will need to link sections from the **Master Template Summary** page.

7.10.11 Archive Master Templates

The **Archive** feature allows administrator to simplify the list of Master Templates without removing templates from the system.

To archive a Master Template:

1. From the **Master Templates** sub-navigation, select **Master Templates List**.
2. Check the box(es) next to the Master Template(s) you wish to archive.
3. Select **Archive**.
4. Click **Confirm** to save the action.

This will hide the archived Master Template(s) from the list.

Please note that archiving the Master Template does not archive its linked classes. Individual instructors will need to archive their own linked classes from the **Class Summary** page (Sec. 7.4.15) or the **Class List** page (Sec. 7.4.34).

7.10.12 Delete Master Template

Administrators can delete a Master Template if no linked classes are set up.

To delete a Master Template:

1. From the **Master Templates** sub-navigation, select **Master Templates List**.
2. Check the box next to a Master Template you wish to remove.
3. Select **Delete**.
4. Click **Confirm** to proceed with the deletion.

This will remove the selected template from the list.

7.10.13 Master Template Reports

Administrators can run reports quickly and easily at the Master Template level using the Master Template Reports feature. This feature allows administrators to generate a single report for all classes linked to a Master Template.

For each Master Template in use, Administrators can select from a variety of reports. ALEKS will generate the report and email it to the administrator as an Excel attachment. The report will include the students' names, instructors' names, class sections, and the relevant report data.

To access the Master Template reports:

1. From the **Master Templates** sub-navigation, select **Master Templates List**.
2. Locate the Master Template you wish to run reports for.
3. Under the **Reports** column, select the paper-like icon for the pre-built Master Templates Reports options. (Or, select the tool-like icon to create a Custom Report; Sec. 7.3.29.)
4. You will see a list of available reports. Click on the link of the report you would like to generate.
5. Select the **Send Me the report** button.

At the end of the process, you will see a confirmation message letting you know that the request is being processed.

NOTE. Blank Excel attachments will be generated if linked classes to a Master Template do not contain students.

7.10.14 Effects of Editing a Master Template

The effects of editing a Master Template are as follows:

- Edits to the Master Template will apply automatically to all linked classes under the Master Template.
- A change made to the Master Template will override changes made in individual linked classes. If something was changed in the course settings on the Master Template, then that specific change is made to all linked classes. Changes are modular. Changing one part in a module will save all settings of that particular module. For example, if something is changed in the template basic settings, all settings from that part of the wizard are saved and will override the linked courses. If a due date is changed in a homework assignment, clicking on the **Save** button will resave all settings for that assignment.
- Instructors of linked classes will receive a message in their ALEKS Message Center (Inbox) when an administrator has made a change to the Master Template.

7.11 District Features



Figure 7.85: Tab Indications

In addition to all the features that are available to school administrators, district administrators have access to the features described below. District administrators have access to four levels of account: institution, instructor, class, and student (Fig. 7.85).

7.11.1 Account Summary

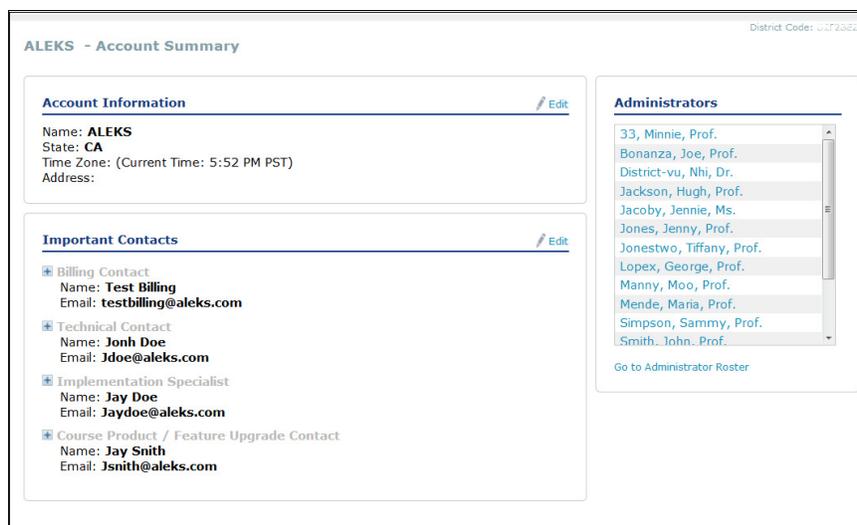


Figure 7.86: Account Summary

Selecting **Institution Administration** and then **Account Summary** displays a page containing account settings and important contact information for the district (Fig. 7.86).

7.11.2 Administrator Roster

District administrators can view a roster for all administrators in the district by selecting **Administrator Roster** from **Institution Administration**. The administrator roster displays administrator information (Fig. 7.87). This roster can be used to manage administrator accounts, including viewing their dashboards, sending messages, and moving and unenrolling students. Many functions are streamlined on this page for updating and managing accounts efficiently.

7.11.3 New Administrator

New district administrator accounts can be created through this feature (Fig. 7.88).

Aleks Internal New IM District - Administrator Roster

0 administrators selected Displaying 5 administrators

View: Active (5) | Archived (0) Download 

[+ New Administrator](#)

Name	Account Type	Last Login	Creation Date
<input type="checkbox"/> NhiNewK12, Nhi	District Admin	06/11/14 (11:51 am)	03/21/14
<input type="checkbox"/> NVK12admin, Nhi, Dr.	District Admin	-	03/21/14
<input type="checkbox"/> Simda, Rosie	District Admin	06/23/14 (11:40 am)	06/23/14
<input type="checkbox"/> Sutton, O'Clare, Prof.	District Admin	07/01/14 (01:16 pm)	04/03/14
<input type="checkbox"/> Varney, Rosie, Dr.	District Admin	04/05/14 (12:19 pm)	04/02/14

Figure 7.87: Administrator Roster

Aleks Internal New IM District - New Administrator

Basic Information * Required

Title: (Choose one)

Salutation:

First Name: *

Middle Initial:

Last Name: *

ID (optional): ⓘ

Login Name:

New Password:

New Password (again):

Contact Information

Address:

City:

State: (Choose one)

Zip Code:

Phone Number:

Email: *

Forward all ALEKS messages to my email address.

Figure 7.88: New Administrator

7.11.4 Class Activity

Administrators can view the number of students who worked in ALEKS at each school each month and the average hours worked each week.

7.11.5 Student Roster (District Level)

Like the student roster at the institution level, district administrators can manage many student accounts within the district, including viewing their dashboards, sending messages, and moving and unenrolling students. Many functions are streamlined on this page for updating and managing accounts efficiently. For full details on the student roster, see Sec. 7.9.11.

7.11.6 Subscription Management System (District Level)

District administrators can also view and manage subscriptions for the district and for schools within the district. For more information about Subscription Management System, see Sec. 7.9.5.

7.11.7 Administrative Reports (District Level)

District administrators can also generate administrative reports for the district and for schools within the district. For more information about administrative reports, see Sec. 7.9.10.

Chapter 8

Teaching with ALEKS

8.1 The ALEKS Educational Paradigm

ALEKS is based on the understanding that students learn mathematics in different ways, at differing speeds. Starting from an accurate assessment of their current knowledge, students in ALEKS are only offered what they have shown themselves ready to learn. (The term “knowledge check” is synonymous with assessment.) They therefore experience less frustration from material that is too difficult and boredom from material that is too easy. Students are engaged in the learning process, and grow in confidence and independence as they use the program. ALEKS periodically reassesses students to test their retention of new knowledge, and if they forget what was once learned, ALEKS smoothly and efficiently guides them through necessary review and reinforcement. With time and persistence, every ALEKS student will progress toward mastery, in a way clearly visible to both student and instructor.

It is normal for students to be in disparate knowledge states; ALEKS puts this information clearly at the instructor’s disposal. The relative mastery attained by students appears clearly from the “Learning Progress Since Latest Assessment” report in the Instructor Module. ALEKS does not require students to progress as a unified group. ALEKS will permit a student to work on any topic in the category “ready to learn,” a list of topics that the student has not yet learned, but has demonstrated (within ALEKS) the readiness to begin learning.

Students using ALEKS will experience new independence and excitement in learning. Instructors also may find different opportunities for optimizing their role in the learning process, with a greatly expanded ability to accurately monitor and effectively promote their students’ learning. The role of the instructor is critical in providing structure, support, and reward for the students’ effective use of ALEKS. If ALEKS is used properly, the instructor’s scope for individual coaching and small-group instruction will be greatly expanded, as will the freedom to teach mathematics in a broader and richer way.

ALEKS gives the instructor a set of powerful resources. Various styles of use of ALEKS

are possible. The following should be understood as suggestions, designed to give instructors a sense of the possibilities offered by ALEKS's extensive library of tools.

8.2 The Instructor and ALEKS

ALEKS is often used in regular classroom settings.

The instructor in an ALEKS class need not be collecting, correcting, or distributing papers, organizing groups, managing materials, giving instructions, or supervising activities. The instructor in an ALEKS class may be just as busy teaching mathematics to individual learners: getting one student started on a new topic, checking another student's work, responding to questions, suggesting alternate methods and explanations, making or reinforcing connections among concepts, and congratulating those who add an item to their pie. ALEKS provides comprehensive support to the student in every phase of its use; the instructor will find that the additional direct support given this way is especially productive. The relation of teacher and student is based on knowledge and discovery, not management and sanction. No one is "behind" in ALEKS; setbacks are readily addressed and overcome; every student can expect to make progress and be recognized.

It is important, especially in the early stages of an ALEKS class, to be generous in recognizing student progress. Students need to understand that when they add an item to their pie, or show progress in a new assessment (knowledge check), it is an achievement. At the same time, formal rewards for the effective use of ALEKS need to be built into the class structure and made clear from the outset (Sec. 8.3).

Students will be assessed at the beginning of their use of ALEKS (following Registration and the Tutorial), and at regular intervals after that. The instructor does not need to supervise all ALEKS assessments; normally, students will be using ALEKS both in and out of the classroom, and taking assessments at various times and locations. Once the students realize that the purpose of the ALEKS assessment is to provide appropriate material in the Learning Mode, there will be little reason to get help, use the textbook or calculator inappropriately, or in any other way achieve inaccurate assessment results.

We recommend supervising the Initial Assessment (Knowledge Check). The students may need assistance in their first use of the system, they will need to be reassured that the assessment is not for a grade, and it is important to get valid results on this Initial Assessment, so that that the students' work in the Learning Mode will be productive from the start. For the instructor's own information, other supervised assessments may also be held at regular intervals to provide accurate "snapshots" of overall progress by the class (Sec. 8.11). We suggest that such supervised assessments be scheduled at the midpoint and end of the class. Also, any assessment results which may be used as a component in the students' grades should, of course, be obtained from supervised assessments.

NOTE. In cases where students do not seem to be making adequate progress in ALEKS,

the student may have received help, or inappropriately used a calculator on an unsupervised assessment, skewing the assessment results and leading to inappropriate material in the Learning Mode. This can be corrected by requesting a new assessment for the student.

8.3 Planning the ALEKS Class

In ALEKS, the instructor has complete freedom in planning lectures, lessons, and assignments, while ALEKS ensures that students can progress toward mastery regardless of their level of preparation. To the extent that students will be working independently in ALEKS, the content of lab classes is provided by their work in ALEKS. Instructors can, however, plan focused small-group instruction from week to week (Sec. 8.5).

It is important to make ALEKS an integral part of the class requirements and grading scheme. The main factor influencing the success of students using ALEKS is the time that they spend in it. This means that the students must be required to spend a suitable amount of time in ALEKS on a weekly basis. (A minimum of three hours is recommended.) They should be informed of this at the beginning of the class, and the instructor should monitor their fulfillment of this obligation. The amount of time required must be reasonable and in balance with other requirements for the course; the instructor should not simply include an ALEKS requirement without reducing the other requirements that the students have to fulfill. For example, the quantity of homework problems may be reduced, as the students will be solving problems in their ALEKS sessions.

These are only suggestions, and experienced instructors may well find approaches that will be more effective with their own students. There must, however, be clear, formal support for the use of ALEKS.

One approach is to provide a certain number of points toward the final grade for each week that the student fulfills their required hours. It is advisable to reward each week, so that the student does not fall into the expectation that all of the required hours can be done at the end; consistency should be rewarded, along with total hours. If a student falls short of the specified hours during a particular week, that week is not rewarded, but the “deficit” is not carried forward; the next week begins with a clean slate (the primary concern is regular use of the system; for this reason a surplus is also not carried forward). Proportional rewards can also be used; each hour spent has a point value, up to the required minimum.

In order to effectively monitor the students’ use, the instructor should check the hours on the “Learning Progress Since Latest Assessment” page or the “Time and Topic” report. This page can be printed out every week for record-keeping. In rare cases, students may try to fool ALEKS by logging on to their accounts and doing something else; this can be seen when the number of items gained per hour is far too low. ALEKS will log the student off if there is no activity after a certain amount of time. Instructors can obtain

a precise record of a student's actual work in ALEKS by viewing the student's "Time and Topic" report.

The students' achievement in ALEKS (as opposed to their use of the system) may also be used as a component in their final grade. For information on how to do this, see the **Instructor Manual**.

8.4 Preparing Your Students

The following considerations may be useful in preparing your students to begin to use ALEKS.

Difficulty of Assessment Questions

The ALEKS Initial Assessment (Knowledge Check) is always comprehensive, in order to achieve the highest accuracy and reliability. In the course of the assessment, some questions may be too easy or too difficult for some students. The students should be told to click the **I don't know** button only if a question is completely unfamiliar to them; otherwise they should do their best to answer. As the assessment proceeds, the questions will focus more and more closely on the outer limits of the student's actual knowledge. In Learning Mode (following the assessment), students will be provided only material that they are prepared to learn.

Length of Assessments

The number of questions asked in an ALEKS assessment varies. Normally, an assessment in Arithmetic requires between 20 and 30 questions.

No Help in Assessments

Explain to the students that they will need paper and pencil for answering assessment questions, but that no help or collaboration whatsoever is permitted during assessment. If the teacher or anyone else helps the student during assessment, even just explaining or rephrasing a question, assessment results may be inaccurate and the student's learning in ALEKS may initially be hindered. Be sure students understand that the purpose of the Initial Assessment is to gain a precise, detailed understanding of what they know, so that in Learning Mode they are given material they are ready to learn. It is not a "test" to pass or fail, and they will not receive a grade on an ALEKS assessment (unless the instructor chooses to use assessments for grading).

8.5 Focused Instruction with ALEKS

The features of the Instructor Module make it possible to prepare students for specific topics that they are going to work on, and to reinforce and expand on knowledge that students have recently acquired. This involves either guiding lectures or focused instruction to small groups of students based on data obtained from ALEKS.

The two kinds of teaching opportunities cued by ALEKS come from two types of information maintained by the system for students over the entire time that they use it: the set of items a student is “ready to learn” (or “outer fringe” of the student’s knowledge state), and the set of items most recently learned (“what students can do,” the “highest” topics in the student’s knowledge state, called the “inner fringe”). (See the Instructor’s Guide under “Inner and Outer Fringes of a Knowledge State,” in the chapter “Knowledge Spaces and the Theory Behind ALEKS”.) The items “ready to learn” are the topics a student may normally choose to work on in ALEKS; the items recently learned (“what a student can do”) are considered the least secure and most likely to need reinforcement. (These items can be reviewed by clicking the **Review** button.) When the students are logged on to ALEKS, these two types of information are used automatically to guide and manage their learning. The instructor, however, can also view the inner and outer fringes in a convenient format to plan focused instruction that will parallel, supplement, and enhance the individual work that their students are doing in ALEKS.

To find this information for a class, the instructor can enter the Instructor Module and select the class, then click on **Reports** and select the **ALEKS Pie** report. This report represents the average student in the given class, and displays the weaknesses and strengths of the class as a whole. The **Show** drop-down box can be used to filter the report by “Current Learning,” “Most Recent Knowledge Check,” or “Initial Knowledge Check.” Complete details on which topics students have mastered, not mastered, and are ready to learn in the class are available in the section below the pie chart and can be viewed by Objectives (if textbook integration or intermediate objectives are being used) or ALEKS Table of Contents.

Using the ALEKS Pie Report we can see a breakdown of student mastery for each topic, send messages directly to students, and view additional topics that a group of students is ready to learn. The purpose of this analysis is that the instructor may pick one or more topics from the list and schedule small-group sessions of focused instruction.

The following are examples that illustrate how these features may be used.

Example 1: Basic

On a Friday evening, the instructor sits down to plan lessons for the following week. He or she logs onto ALEKS, selects the name of a class in Arithmetic, and clicks on “ALEKS Pie” under “Reports” to access the ALEKS Pie Report. A pie chart appears showing the average profile of mastery in the class. The “slice” of the pie chart for Whole Numbers is full to about 90 percent; the slices for Fractions, Decimals, and Proportions and Percents are filled much less, ranging between 20 and 40 percent. This indicates that lessons for the week may focus profitably on the most advanced Whole Numbers topics as well as on topics of moderate difficulty in Fractions, Decimals, and Proportions and Percents.

Example 2: Intermediate

On a weekend afternoon, the instructor logs on to ALEKS, selects the name of a class in Arithmetic, and clicks on “ALEKS Pie” under “Reports” to access the

ALEKS Pie Report. Next the instructor clicks on the “View all topics” toggle, in either the ALEKS tab or the Objectives tab, and when the list of topics appears, the instructor scans this list for items of particular difficulty. “Ordering Numbers with Exponents” has 16 students currently able to choose this topic from their pie charts. The instructor notes this topic down for class discussion early in the week. With the benefit of some timely preparation, the students can be expected to master this troublesome topic with less difficulty.

Example 3: Advanced

On a Monday morning, the instructor logs on to his or her ALEKS account, selects the name of a class in Algebra 1, and clicks on “ALEKS Pie” under “Reports” to access the ALEKS Pie Report. Next, the instructor clicks on the “View all topics” toggle, in either the ALEKS tab or the Objectives tab, and the list of topics appears, clearly showing what students have mastered, not mastered and are ready to learn. The experience and expertise of the instructor are used to used to plan with this information. Suppose that there is only time in the week’s schedule for two small group sessions. (The ALEKS class has only one hour in the lab, and ten minutes are set aside to speak with each small group; the remaining forty minutes are for helping students in the lab.) The instructor will look over the topics with two questions in mind: which topics have the greatest numbers of students, and which are most worth discussing.

For example, looking at the list of topics “Ready to learn,” the instructor sees “Solving a Linear Equation with Absolute Value: Problem Type 1.” The instructor knows from experience that students have difficulty with the concept, and that they are more successful with it if they have had a chance to review. This topic has twelve students out of thirty in the class. The instructor uses the message feature to send a note to these students, asking them to meet in the front of the room at the beginning of the lab; the students will receive this note the next time they log on to ALEKS, no later than the beginning of that lab.

Looking over the list of topics “Mastered,” the instructor sees “Marking a point in the coordinate plane,” with ten students. Although the number of students is less than for other topics, this one seems to the instructor richer in its content of mathematical culture than the others; students who have just worked on this topic are may be using the coordinate plane for the first time. Thus this is chosen as the second topic, and a second message is sent to these students, to meet at the front of the room, ten minutes into the lab.

8.6 Models of Classroom Integration

There are numerous ways in which ALEKS can be and is used in concrete educational situations.

Supervised Math Lab

Expert supervision can be provided for the students' use of ALEKS in regularly scheduled mathematics lab periods, whether or not these are part of a conventional class structure. Students benefit from the direct coaching and assistance of qualified instructors in the course of their work with ALEKS.

Math Lab in Structured Course

The supervised mathematics lab may be part of a structure of class meetings, combined with conventional and lecture-style classes. The instructor in such a setting need not gear the sequence of topics covered in classes in any way to what the students are doing in ALEKS; the students' independent work in ALEKS will increasingly benefit their performance on quizzes and tests, as well as their understanding of lectures. ALEKS is not designed to "teach to the test," although experience has shown that students' performance on comprehensive tests improves dramatically when they have worked with ALEKS over time.

Small-Group Instruction

The recommended use of ALEKS in a classroom setting makes use of the detailed analysis of individual student knowledge provided through the Class Report page to tailor the lectures to the skills of students.

Self-Paced Learning

In this scenario students may use the school computer lab on their own, with only informal supervision. ALEKS is used in this case much as it is for distance learning, except that students have the opportunity for closer consultation with the instructor.

Distance Learning

ALEKS is used by students who may never enter the physical classroom, or may enter only on a few occasions for orientation and supervised assessments. ALEKS provides a range of features for communication between instructor and student, as well as powerful facilities for the monitoring and evaluation of student work.

Regardless of which approach is used, you can derive more benefit from ALEKS through monitoring the students' use of ALEKS and communicating with them, whether in direct contact, by email, or by messages through the ALEKS system. As discussed above, we recommend that a certain number of hours in ALEKS each week be required (Sec. 8.3); this should be made clear from the start as part of the published course syllabus and rewarded appropriately through the grading scheme. Students' progress in ALEKS should be recognized and reinforced early on; conversely, students who do not seem to make adequate progress should be contacted promptly.

The following sections of this chapter provide more information on these issues affecting the classroom use and integration of ALEKS.

8.7 Monitoring Student Use

In the day-to-day use of ALEKS by a class, a principal concern of the instructor is to monitor that students are using ALEKS regularly and for at least the required amount of time. The most convenient place to find this information is the “Time and Topic report for all students” (under “Reports”). Each student’s name is displayed on this page along with the total number of hours that student has spent logged on to the system. There is also a breakdown of how much time the student has spent in ALEKS on a daily basis. Students can see this same breakdown of daily usage in their own accounts by using the “Report” link.

It is also important that critical assessments be supervised by the instructor, to ensure that valid results are received (Sec. 8.2).

8.8 Monitoring the Progress of a Class

The instructor can also use the bar graphs on the “Learning progress since latest assessment” page to see how close each student is to mastery of the subject matter. Keep in mind that the bar graphs displayed on this page show only the students’ achievement as of their last assessment (in blue) and any progress made in the Learning Mode since that assessment (in green). For a more panoramic view of the progress made by a group, select the “Total progress” report. This displays the difference between the students’ knowledge on their first and their most recent assessments.

The “Detailed progress history” report is an expanded version of “Learning progress since latest assessment.” It shows the learning history for all students, with one bar graph for each assessment taken. The bar graphs are stacked, with the earliest on the bottom, and the most recent at the top. To the left of each bar there is the date of the assessment and a notation indicating the reason for the assessment.

To see each of the assessments for a given student, with that student’s progress subsequent to each assessment in the Learning Mode, the instructor should view the page “Progress report for a particular student in this class” for the student.

8.9 Monitoring Individual Progress

On the page “Progress report for a particular student in this class” there is a line for each assessment taken by a particular student, with bar graphs showing mastery as of that assessment and subsequent progress made in the Learning Mode. The Initial Assessment is shown in the bottom line, with later assessments “stacked” upward. By following progression from earlier to later assessments, the instructor can see very clearly how a student is progressing toward mastery of the subject matter.

Use caution in interpreting this information. Students vary widely in how they master

material. Progress made in the Learning Mode (green bar) is not always immediately reflected in the student's level of mastery on a subsequent assessment. Some students progress more quickly in Assessment Mode than in the Learning Mode. In such cases the "new" blue line is further ahead than the green line just below it. On the other hand, many students make faster progress in the Learning Mode than in assessment. In such cases the "new" blue line lags behind the green line below it. It is very common for a student to master the entire subject matter two or more times in the Learning Mode before that mastery is finally confirmed in an assessment. Part of the power of the ALEKS system is that it accommodates individual differences in behavior.

NOTE. In cases where a student moves backward in his or her mastery, the instructor should contact the student. If the student did not take the assessment seriously enough, a new one can be requested.

8.10 Moving a Student to a New Class

A student subscription to ALEKS entitles the student to work through as many subjects in the sequence as the student masters during the subscription period (with some exceptions). When a student completes the objectives of a class, the student should be moved to a more advanced class.

8.11 Ordering Assessments

Following the Initial Assessment or Knowledge Check (which should be taken under the instructor's supervision), the ALEKS system will automatically schedule other assessments as needed to guide the students' progress. The instructor, however, can order an individual or group assessment at any time. It is a good practice for the instructor to schedule supervised assessments at regular intervals (interim and end of the class), as "snapshots" of overall class achievement.

8.12 Independent Study and Distance Learning

The ALEKS system is well suited to use in an independent study or distance learning context. ALEKS is self-contained and adaptable to any program or class materials. Students using ALEKS under these circumstances know exactly what the class goals are, where they stand in relation to those goals, and what they need to do to achieve them.

For the instructor administering an independent study or distance learning program, ALEKS solves nearly every problem of management, oversight, evaluation, and communication. All of the information needed to keep track of far-flung independent learners is at the instructor's fingertips, through the features of the Instructor Module. The

internal message system of ALEKS puts the instructor in constant touch with students, without dependence on telephone or email communication.

8.13 The ALEKS Knowledge Structure

Each ALEKS subject, such as Algebra 1, has a knowledge structure associated with it. The number of items comprised in a knowledge structure ranges roughly between 200 and 1000 topics. A knowledge state is a subset of items which may correspond to the knowledge of an actual student (i.e., there may be a student who has mastered exactly those items, and no others). A knowledge structure is the family of all the knowledge states that we may encounter for a given subject.

An ALEKS structure affects virtually every aspect of ALEKS's functioning. In the ALEKS Assessment Mode it enables ALEKS to make inferences from student answers, keeping the ALEKS assessments brief but accurate.

The structure is also crucial in the ALEKS Learning Mode. Using the structure of a given course product, the system knows precisely which items are in the inner fringe and outer fringe of each of the knowledge states in ALEKS. The items in the outer fringe of a student's knowledge state are those items that the student is the most ready to learn next. (From a technical standpoint, an item is in the outer fringe of a state if adding that item to the state results in another feasible knowledge state.) These items are presented to the student in MyPie when the student moves the mouse pointer over the ALEKS Pie Chart. Similarly, an item in the inner fringe of a student's state is an item either recently learned or one whose mastery by the student might be shaky. (Technically, an item is in the inner fringe of a state if removing that item from the state results in another feasible knowledge state.) They are presented to the student when the student is having difficulty in the ALEKS Learning Mode and during ALEKS Review.

An additional benefit of the proliferation of connections among items in ALEKS is its extreme flexibility from the students' viewpoint: for any particular topic, there is a vast number of possible approaches, or learning paths, which may lead students to mastery of that topic. This flexibility does not imply, however, that *any* order is possible. Each learning path leading to a particular topic must contain, at a minimum, the items which are "below" such topic in the ALEKS structure.

8.14 Objectives

ALEKS also provides a facility for creating multiple sets of programs within a single class (See the **Instructor's Guide** under **Set Objectives / Modules**, in the chapter **Instructor Module**). The Objectives feature makes it possible to prioritize particular sets of items for particular periods of time, by constraining the choices available to the

students. When Objectives have been set, students will be guided to these items by the shortest possible path.

Chapter 9

Knowledge Spaces and the Theory Behind ALEKS

9.1 History

Knowledge Space Theory has been under development since 1983 by Professor Jean-Claude Falmagne, who is the Chairman and founder of ALEKS Corporation, and other scientists (especially, Jean-Paul Doignon from Belgium) in the United States and Europe.

ALEKS is the first computer system to embody Knowledge Space Theory for assessment and teaching.

9.2 Theory

A complete exposition of Knowledge Space Theory is not intended here. The Bibliography contains a number of references for those interested in further details (Sec. 9.3). Knowledge Space Theory is expressed in a mathematical discipline often referred to as “Combinatorics.” What follows here is a brief, intuitive summary introducing certain fundamental terms employed in discussions of ALEKS.

9.2.1 Domain, Items, and Instances

An academic discipline such as Arithmetic or Algebra is represented as a particular set of problems or questions that comprehensively embody the knowledge of the discipline. That set is called the **domain**, and the problems are called **items**. A symbolic representation of the domain of Arithmetic uses dots standing for items (Fig. 9.1). One of the items, which might be entitled “Word problem with percentages,” is indicated by a line. The problem in the rectangle is an **instance** of that item.

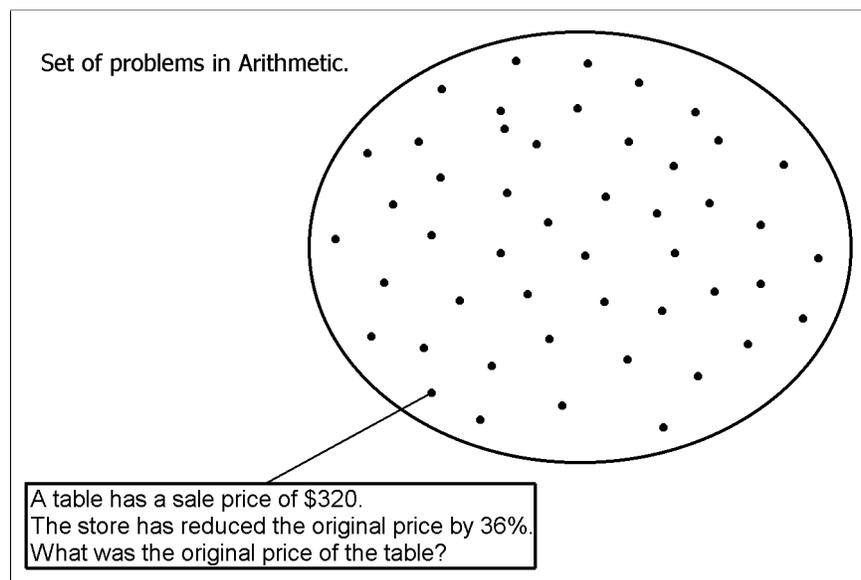


Figure 9.1: Domain of Arithmetic

Each item, or problem type, has at least dozens, more often hundreds or thousands of instances. Full mastery of the subject implies the ability to solve problems corresponding to all the items making up the domain.

Determining the set of items that make up the domain is the first step in constructing a “knowledge structure” for that domain. This is done by research in instructional materials and standards and systematic consultation with professionals. Substantial agreement is achieved among expert pedagogues on the choice and definition of items. The set of items finally arrived at and forming the domain must be comprehensive, that is, it must cover all the concepts that are included in the particular academic discipline.

9.2.2 Knowledge States

The **knowledge state** of a student is represented by the set of items in the domain that he or she is capable of solving under ideal conditions (Fig. 9.2). This means that the student is not working under time pressure, is not upset or impaired in any way, etc. In reality, careless errors may arise. Also, the correct response to a question may occasionally be guessed by a subject lacking any real understanding of the question asked. (This will occur very rarely when using the ALEKS system, because multiple-choice answers are not used.) An individual’s knowledge state is not directly observable and has to be inferred from responses to questions.

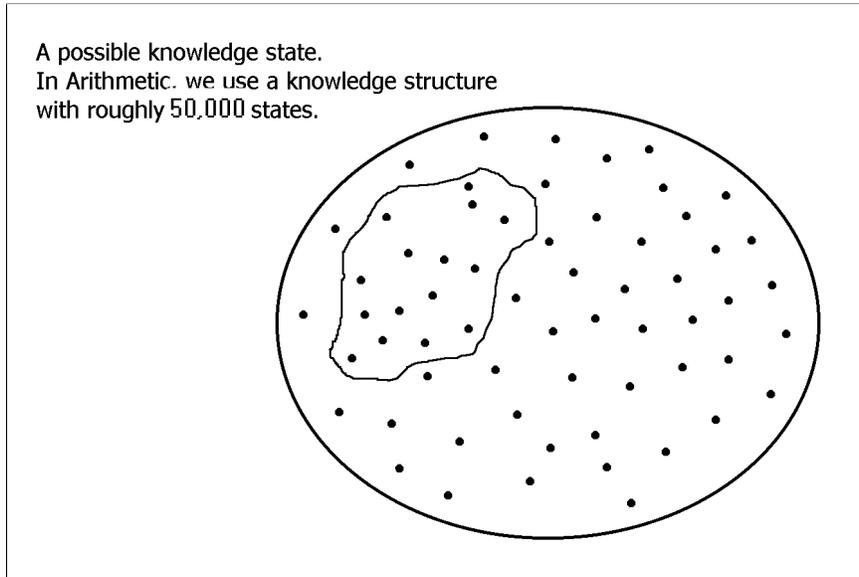


Figure 9.2: Knowledge State

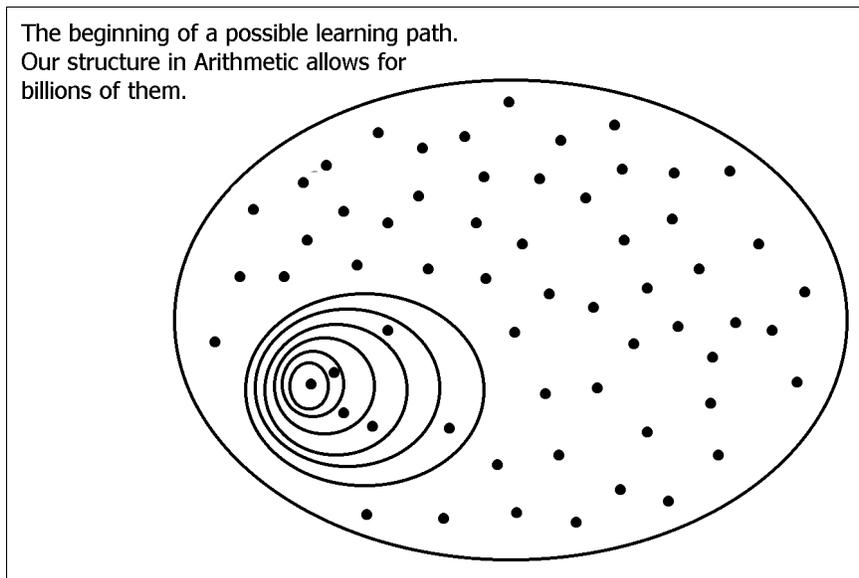


Figure 9.3: Learning Path

9.2.3 Knowledge Structures and Knowledge Spaces

It should be obvious that not all possible subsets of the domain are feasible knowledge states. For instance, every student having mastered “long division” would also have mastered “addition of decimal numbers.” Thus, there is no knowledge state containing the “long division” item that does not also contain the “addition of decimal numbers” item. The collection of all feasible knowledge states is referred to as the **knowledge structure**. The very large number of states for any product means that there are many possible ways of acquiring knowledge, i.e., many learning paths (Fig. 9.3). In the ALEKS knowledge structure there are literally billions of such learning paths. A “knowledge space” is a particular kind of knowledge structure.

As in many real-life applications, “noise” and errors of various sorts often creep in, which require the elaboration of a probabilistic theory. The ALEKS System is based on such a probabilistic theory, which makes it capable of recovering from errors. For instance, ALEKS is capable of deciding that a student has mastered an item, even though the student has actually made an error when presented with a problem instantiating this item. This is not mysterious: a sensible examiner in an oral exam, observing an error to a question about addition would nevertheless conclude that the student has mastered addition, for example, if that student had given evidence of skillful manipulation of fractions.

9.2.4 Inner and Outer Fringes of a Knowledge State

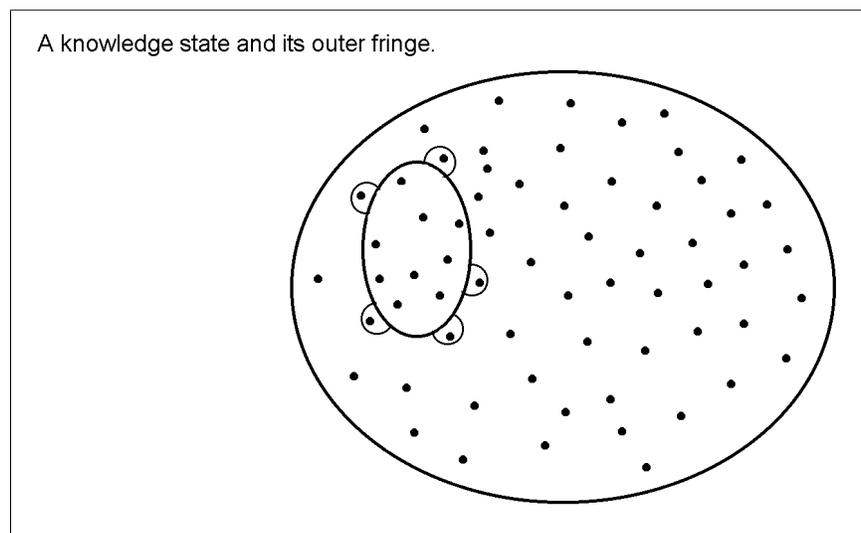


Figure 9.4: Outer Fringe of a Knowledge State

An item that has not yet been mastered by a student may not be immediately learnable by that student. Learning one or more prerequisite items may be necessary. Consider

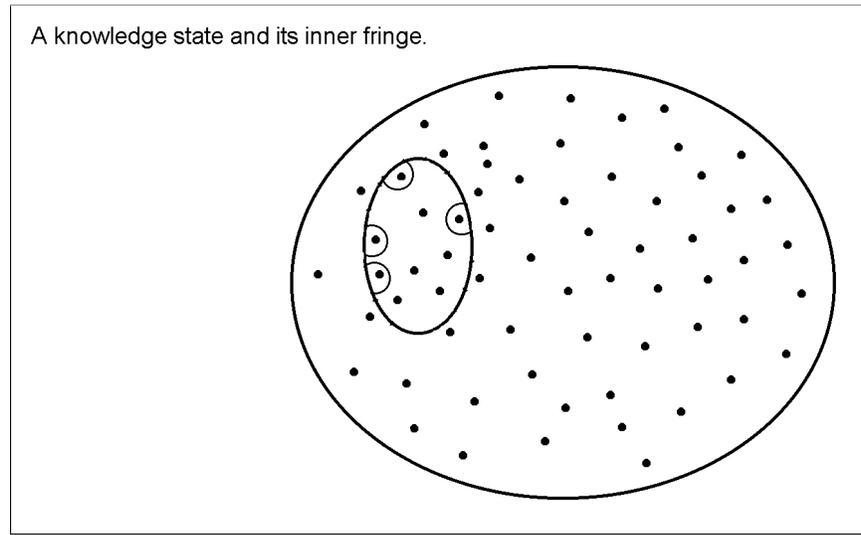


Figure 9.5: Inner Fringe of a Knowledge State

a student in a particular knowledge state \mathbf{K} . The set of all items that may be learned immediately by a student in that state \mathbf{K} is called the **outer fringe** of the state \mathbf{K} . The outer fringe of a state \mathbf{K} is defined as the set of all items, any one of which **may** be the next one learned. An item is in the outer fringe of the state \mathbf{K} if the addition of that item to the state \mathbf{K} forms a new, feasible knowledge state (Fig. 9.4). Typically, the outer fringe of a knowledge state will contain between one and several items.

Similarly, an item is in the inner fringe of a state \mathbf{K} if there is some other knowledge state to which that item may be added to form state \mathbf{K} (Fig. 9.5). The **inner fringe** of a state \mathbf{K} is thus defined as the set of all items, any one of which **may** have been the last one learned.

These two concepts of inner and outer fringes are used in powerful ways in the Learning Mode of the ALEKS system. For example, the system always offers a student problems to solve that are based on items in the outer fringe of his or her state. If ALEKS judges that a student is experiencing difficulties in learning some new item, ALEKS typically reviews the mastery of items in the inner fringe of the student's state that are also related to the new item to be learned.

9.2.5 Assessment

How can ALEKS uncover, by efficient questioning, the particular knowledge state of a student? While the details of ALEKS's method for achieving such a goal are technical, the guiding intuition is straightforward. At every moment of an assessment, ALEKS chooses a question to be "as informative as possible." (In ALEKS, assessments may be called "knowledge checks.") In our context, this means a question which the student has, in the system's estimate, about a 50 percent chance of getting right. The student's

response (correct or false) determines a change in all the likelihood values: for instance, if the question involved manipulation of fractions, and the student's response was correct, then all the knowledge states containing this item would have their likelihood values increased. The specific way the questions are chosen and the likelihood values altered makes it possible for ALEKS to pinpoint the student's state in a relatively short time. In Arithmetic, for example, approximately 15–25 questions usually suffice.

Finally, it should be noted that the assessment report given to students, instructors, and administrators is a very precise **summary** of the student's knowledge state. If the structure is known, the outer fringe and inner fringe together completely define the student's knowledge state. Internally, the system registers the student's knowledge or non-knowledge of each item in the domain.

A more thorough but still accessible overview of Knowledge Space Theory is available on the ALEKS website: Cosyn, Doignon, Falmagne, "The Assessment of Knowledge, in Theory and Practice":

https://www.aleks.com/about_aleks/Science_Behind_ALEKS.pdf

A comprehensive treatment of Knowledge Space Theory can be found in Doignon and Falmagne, *Learning Spaces* (Springer-Verlag, Berlin, Heidelberg, 2011).

A comprehensive scientific bibliography on Knowledge Spaces is maintained here:

<http://css.uni-graz.at/kst.php>

For a more selective bibliography, see the following section.

9.3 Selected Bibliography

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Chapter 10

Frequently Asked Questions

10.1 General

General questions on ALEKS concern what it is, its purpose, and what it contains.

What is ALEKS?

ALEKS is an online educational software program based on a cycle of assessment and learning. ALEKS course products include Mathematics, Statistics, Accounting, Business, and Chemistry. By knowing exactly which concepts the student has mastered and which are new but within reach, ALEKS enables the student to work on those concepts they are most ready to learn. ALEKS is a full-time automated tutor, including explanations, practice and feedback. ALEKS interacts closely with the student, continuously updating its precise map of the student's knowledge state. ALEKS combines the advantages of one-on-one instruction and evaluation with the convenience of being on-call, on your computer, 24 hours a day, seven days a week. The cost of ALEKS is a small fraction of the cost of a human tutor.

What makes ALEKS different?

A great many important differences exist between ALEKS and other kinds of "educational software," including its finely individualized instructional features, easy access over the Internet, rigorous and comprehensive educational content, and full-featured class-management module for instructors and administrators. A critical difference is the capacity of ALEKS for efficient, precise, comprehensive, and qualitative assessment. This not only makes it a valuable tool for monitoring educational progress, but also enables it to provide students with the material they are most able to learn at a particular time. Students will not be given material they have already mastered, or topics for which they have not yet demonstrated prerequisite knowledge.

ALEKS is a self-contained learning environment, with complete sets of practice and explanatory units needed for the subjects that it covers. The units may also

be referenced or linked to textbooks for extended treatment of mathematical concepts. There is an online student mathematics dictionary accessed by clicking on underlined mathematical terms (hypertext links), and a diagnostic feedback facility that, in many cases, is able to explain the nature of misunderstandings and errors made by students.

For instructors, ALEKS offers a complete administrative and monitoring facility through which individual and group progress can be checked, standards established, enrollment managed, and messages exchanged. ALEKS can be configured for use with diverse educational standards.

ALEKS is not a game or “edutainment.” It is an automated educational tool with robust, carefully-designed features for both learners and educators.

What are the parts or “modules” of ALEKS?

The principal “modules” of ALEKS are the **Assessment Mode** (assessments are also called “knowledge checks”), in which student knowledge is rigorously assessed, the **Learning Mode**, where students work on mastering specific concepts, the **Instructor Module**, in which instructors and administrators are able to monitor student progress and carry out administrative functions, and the **Administrator Account**, which permits management and monitoring of an arbitrary number of separate institutions, such as those making up a school district. There is also a **Tutorial** (which students take when first registering with the system), online help, a mathematical dictionary, graphic display of assessment results and learning progress, and many other features.

Why is ALEKS on the Internet?

ALEKS is available on the Internet so that a student who has registered with the system can use it from any suitable computer, in any location. No disks, CD’s, peripherals, or backup facilities are required.

10.2 Technical

The technical information needed to use ALEKS is minimal. These few questions are all that are likely to be asked, even in a large group of users.

What are the system requirements for using ALEKS?

[**Sec. 3.2**] Fig. 10.1 presents the technical requirements for ALEKS in summary form.

Tablets. All courses are desktop and tablet compatible with the exception of AP Statistics (Quantitative), High School Prep for Statistics, Business Math, Fundamentals of Accounting, and Introduction to Statistics. These courses are not compatible with tablet devices.

Note that any of the kinds of Internet connection (cable, ISDN, DSL, or wireless) typical in computer labs are adequate for use with ALEKS.

	PC	Macintosh	Chromebook
Operating System	Windows 7+	MacOS 10.7+	Chrome OS
Processor	Any	Any	Any
RAM Memory	64+ MB	64+ MB	Any
Browser	Explorer 11+, Firefox 25+, Chrome 30+	Safari 6+, Firefox 25+, Chrome 30+	Chrome 30+
Screen Resolution	800x600 (1024x768 for Chemistry)	800x600 (1024x768 for Chemistry)	Any

Figure 10.1: System Requirements

Where can I get more information on ALEKS? How can I try out the system?

The ALEKS website provides complete information on the ALEKS system, including a Quick Tour, Free Trial use, licensing, history and theory, and technical support.

<https://www.aleks.com>

10.3 Theory

For those interested in looking beneath the surface, these questions concern the principles on which ALEKS is designed and constructed.

What is the theory behind ALEKS?

[Chapter 9] ALEKS is based on a field of Cognitive Science (Mathematical Psychology) called “Knowledge Spaces” (or “Learning Spaces”). The purpose of research in Knowledge Spaces is to model human knowledge in any subject, using mathematical tools such as Set Theory, Combinatorics, and Markovian Processes, so as to make possible fast and accurate assessment through interactive computer applications. There are numerous scientific publications in the field of Knowledge Spaces dating back to the early 1980’s. A recent, authoritative treatment (with Bibliography) is Doignon and Falmagne, *Learning Spaces* (Berlin, Heidelberg: Springer-Verlag, 2011).

What is an “item”?

[Sec. 9.2.1] In Knowledge Space theory, an “item” is a concept or skill to be learned, the mastery of which is captured by a “problem type” serving as the basis for specific assessment and practice problems. Thus the item “Addition of two-digit numbers without carry” might produce the problem (instance) “What is 25 plus 11?”

What is a “domain”?

[Sec. 9.2.1] In Knowledge Space theory, a “domain” is the set of all items making up a particular subject matter, such as Arithmetic. A learner is considered to have

mastered the domain when that learner can solve problems corresponding to all the items in the domain.

What is a “knowledge state”?

[Sec. 9.2.2] In Knowledge Space theory, a “knowledge state” is the set of items belonging to a domain that a learner has mastered at some point in time. We speak of knowledge states in relation to a particular learner and a particular domain. Obviously, a learner’s knowledge changes in time, and the goal of learning is that the knowledge state should eventually include (correspond to) the entire domain.

What is the “outer fringe” of a knowledge state?

[Sec. 9.2.4] In Knowledge Space theory, a learner’s “outer fringe” is the set of items, any one of which can be added to the current knowledge state without others to make a new, feasible knowledge state. These are the items that the student is considered most “ready to learn.” Progress is made from one state to another through one of the items in the first state’s “outer fringe.”

What is the “inner fringe” of a knowledge state?

[Sec. 9.2.4] In Knowledge Space theory, a learner’s “inner fringe” is the set of items, any one of which can be taken away without any others from the current knowledge state to make a new, feasible knowledge state. These are the items that the student may have learned recently, and thus whose knowledge might need reinforcement.

What is a “knowledge structure”? What is a “knowledge space”?

[Sec. 9.2.3] In Knowledge Space theory, “knowledge structure” or “knowledge space” (the two concepts differ in a technical way) refers to the collection of feasible knowledge states for a particular domain. It is a key point that not all sets of items from the domain (subsets of the domain) are feasible knowledge states. For instance, in mathematics there can be no knowledge state containing the item “finding the square root of an integer” that does not contain the item “addition of two-digit numbers without carry,” since no one will master the first without having mastered the second.

How was the structure created?

The knowledge structures (or, briefly, “structures”) used by ALEKS are created by analysis of the subject matter and refined on the basis of data obtained from students’ learning experiences. When ALEKS assesses a student, it is actually searching the structure for knowledge states that match the student’s present competence.

What is the educational philosophy behind ALEKS?

The educational use of ALEKS is not tied to any particular theory of education or knowledge acquisition. A key insight underlying ALEKS is the existence of a vast multiplicity of diverse “learning paths” or sequences of topics by which a field can be mastered. Based on an inventory of knowledge states that numbers in the tens of thousands (for the subjects currently covered by ALEKS), the specialized tools of

Knowledge Space theory make it possible for the system to accommodate literally billions of possible individual learning paths implied by the relations among states. ALEKS does not embody a particular philosophy of teaching mathematics; it is compatible with any pedagogical approach.

10.4 Assessments and Reports

Much of the power of ALEKS comes from its capacity for accurately and efficiently assessing the current state of a learner's knowledge.

What is an ALEKS assessment (knowledge check)?

[**Chapter 4**] An assessment by the ALEKS system consists of a sequence of mathematical problems posed to the student. The answers are in the form of mathematical expressions and constructions produced by the system's input tools (no multiple choice). The student can answer "I don't know" where necessary. During an ALEKS assessment, the student is not told whether answers are correct or incorrect. The assessment is adaptive. Each question after the first is chosen on the basis of answers previously submitted. Assessment problems (like practice problems) are algorithmically generated, with random numerical values. The length of the assessment is variable, between 15 and 35 questions. There are no time constraints, but some assessments can take less than a half-hour and a few more than an hour and a half. Students taking an assessment need to have paper and pencil. The ALEKS calculator button will become active when use of a calculator is permitted.

No help whatsoever should be given to students taking a knowledge check, not even rephrasing problems. Outside help can easily lead to false assessment results and hinder subsequent work in the ALEKS Learning Mode.

Students may be assessed when they first register with ALEKS. It is advisable that all assessments from which the instructor uses data for grading or a similar purpose take place under the instructor's supervision. At a minimum, the Initial Assessment should be supervised.

How does the ALEKS assessment work?

[**Sec. 9.2.5**] In assessing a student's knowledge, the system is in fact determining which of the feasible knowledge states for that subject correspond to the student's current knowledge. The assessment is probabilistic, so it is not fooled by odd careless errors. (Lucky guesses are very rare, because multiple choice answers are not used.) Likelihood values (values for the likelihood that the student is in a particular knowledge state) are spread out over the states belonging to the structure. With each correct answer, the likelihood of states containing the item for which a correct answer was given is raised and that of states not containing the item lowered. The reverse occurs for incorrect answers or "I don't know." At each step of the assessment, the system attempts to choose an item for which it

estimates, based on current likelihood values, that the student has about a fifty-fifty chance of success; such questions are maximally informative. When the likelihood values of a few states are extremely high and those of all the rest are extremely low—in technical terms, when the entropy of the structure is lower than a certain threshold value—the assessment ends and results are produced.

If a student makes a careless error or lucky guess, this will appear inconsistent with the general tendency of the student’s responses, and the system will “probe” that area of knowledge until it is sure. For this reason, inconsistent assessments may require more questions.

10.5 Learning Mode

Students spend by far the greatest part of their time in ALEKS in the Learning Mode. The features of the Learning Mode are designed to provide a maximum of support to the student’s growing mastery of course materials.

What is the Learning Mode?

[**Chapter 5**] The Learning Mode in ALEKS contains features to help students practice and master specific mathematical concepts and skills. In the Learning Mode, students are always working on a specific concept that they have chosen and that, in the system’s estimation, they are fully prepared to master. If the learner successfully solves an appropriate number of problems based on that concept, the system will tentatively determine that it has been mastered and offer a new choice of topics. If the student has difficulty, the system will attempt to diagnose and interpret the student’s errors. It will also provide explanations of how to solve problems and definitions of mathematical terms. It may suggest the name of a classmate who can help. If the student is unable to master the concept right now, or if the student wishes to change topics, a new choice of topics will be offered. After a certain amount of time has been spent in the Learning Mode, or after a certain amount of progress has been made, the student will automatically be reassessed.

What is the relationship between the Assessment Mode and the Learning Mode in ALEKS?

The Assessment and Learning Modes work together in a cyclical fashion, beginning with the Initial Assessment (Knowledge Check). A student is assessed, and the results of the assessment serve as a basis for the student’s entry into the Learning Mode (the student works on concepts that the assessment showed that student most “ready to learn”). After a certain time in the Learning Mode, during which the results of the previous assessment are tentatively updated according to whether the student masters or fails to master new concepts, the student is reassessed and the cycle begins again. In this sense, ALEKS is an interactive learning system guided and powered by ongoing diagnostic assessment.

NOTE. Students who do not take an Initial Assessment will begin this cycle in Learning Mode.

10.6 Educational Use

ALEKS also provides a full range of features for successful integration into a variety of teaching styles and class plans.

What is the best way to use ALEKS with my class?

The greatest factor in successful use of ALEKS is regular, structured use, with close monitoring of student progress by the instructor. We recommend scheduling regular lab sessions with ALEKS, totalling at least three hours per week, as part of your class requirements. Not every lab session need be supervised by the instructor, but the Initial Assessment should be. Any other interim and concluding assessments scheduled specially by the instructor normally should also be supervised.

There has been successful use of ALEKS in a very wide variety of contexts and structures, including independent study. ALEKS Corporation is happy to consult with instructors on the best way to use ALEKS with their students. Also, extensive materials on implementation strategies in ALEKS are available on the ALEKS website.

Can ALEKS be used with handicapped and learning-disability students? Is ALEKS a remedial tool?

ALEKS is designed to help all students who can read sufficiently to understand what is being displayed on the screen, and who can use a computer. It has been used successfully with students exhibiting a range of learning disabilities. A large part of ALEKS content is compatible with screen-reading technology.

Does ALEKS need to be used with a particular textbook or curriculum?

ALEKS is designed to be used with any program, curriculum, or textbook. The system may also be referenced or linked to a textbook or online applications for particular classes. The fundamental idea of the ALEKS system is to allow students to pursue individualized paths to mastery of the subject matter. For this reason instructors may often find their students learning material that has not yet been covered in the class.

Does ALEKS have special features for educators?

[**Chapter 7**] Students' use of ALEKS and their progress toward mastery can be monitored using the features of the Instructor Module. The Instructor Module also enables instructors and administrators to establish the programs and standards used by ALEKS, to configure accounts, to find statistics on school district use, and to exchange messages. A instructor or administrator who has been registered with ALEKS enters the Instructor Module immediately upon login.

How can I contact ALEKS Corporation Customer Support?

[Sec. 11] You can contact ALEKS Corporation using the information in Chapter 12 of this manual. Students should approach their instructor first with any questions or problems regarding the use of ALEKS. Questions the instructor cannot answer should be brought to our attention.

Chapter 11

Support

Current information on ALEKS is available at the ALEKS website:

<https://www.aleks.com>

Technical support and consultation on the effective use of ALEKS is provided to educators by ALEKS Corporation Customer Support. Please contact the support group via the web:

<https://support.aleks.com>

by telephone:

(714) 619-7090

or by fax:

(714) 245-7190

NOTE. We ask that students using ALEKS not contact us directly, but approach their instructors first. It is hoped that the information in this Instructor's Manual will enable instructors to answer many of their students' questions.

We also welcome any and all comments and feedback on ALEKS. Here is our mailing address:

ALEKS Corporation Customer Support
15460 Laguna Canyon Road
Irvine, CA 92618

Appendix A

ALEKS Student User's Guide

A.1 System Requirements

ALEKS runs on many devices with various operating system and web browser configurations.

- PCs must have at least 64 MB of RAM and Windows 7 or higher. Compatible browsers are Internet Explorer 11.0 or higher, Firefox 25 or higher, and Chrome 30 or higher.
- PowerMacs or iMacs must have at least 64 MB of RAM and operating system Mac OS 10.7 or higher. Compatible browsers are Safari 6 or higher, Firefox 25 or higher, and Chrome 30 or higher.
- All courses are desktop and tablet compatible with the exception of AP Statistics (Quantitative), High School Prep for Statistics, Business Math, Fundamentals of Accounting, and Introduction to Statistics. These courses are not compatible with tablet devices.

NOTE. The most up-to-date requirements can always be found on the ALEKS website.

A.2 Registration

In order to register as an ALEKS user, you need a **Class Code** (10 characters) provided by your instructor. When you register with ALEKS, your name is entered into the database, and records of your progress are kept.

1. Go to the ALEKS website:

<https://www.aleks.com>



Figure A.1: The ALEKS Website

When entering this URL, pay careful attention to the spelling of **aleks**.

2. Click on **SIGN UP NOW!** on the left of the page, under the space for Registered Users (Fig. A.1).
3. At the beginning of Registration you will be asked for your **Class Code**. The Class Code is supplied by your instructor. Enter this in the spaces provided, on the **left-hand side** of the window, and click on **Continue** (Fig. A.2).
4. Next, ALEKS will check whether you have ever used ALEKS before. Check the appropriate response and click on **Continue**. If you have used ALEKS before, you will be prompted to enter your ALEKS Login Name and Password before moving on.
5. Enter your personal information and choose a Password. Supplying an email enables your site administrator to help you with problems more quickly. You will also be able to enter your Student ID number.
6. At the end of registration you will be given a Login Name. You will need the ALEKS Login Name and your Password to return to ALEKS.
Your Login Name and Password can be typed with upper- or lower-case letters. Neither may contain spaces or punctuation. If you forget your Password, click on the link **Forgot your login info?** located underneath the Password field on the ALEKS Home page.
7. You will need to wait for your instructor's authorization before starting to use your new account. If you need to log off now, you can log back on later using your Login

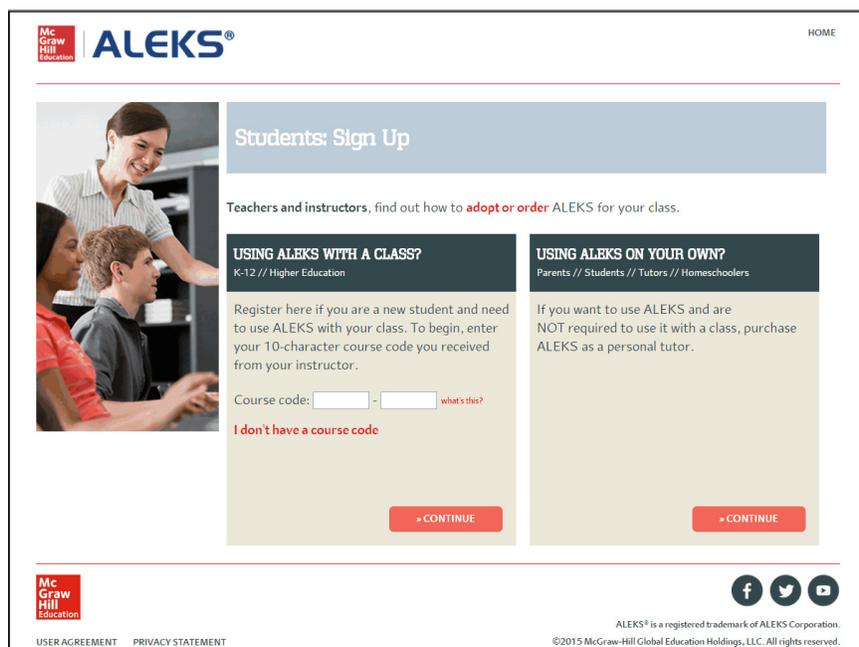


Figure A.2: Class Code

Name and Password. As soon as your instructor authorizes your registration, you will be able to start using ALEKS by beginning the Tools Tutorial.

A.3 Tools Tutorial

The ALEKS Tools Tutorial teaches you how to enter your answers in ALEKS. ALEKS avoids multiple-choice questions. Most answers are complete mathematical expressions and constructions. The Tools Tutorial is not intended to teach mathematics. The Tools Tutorial teaches you how to use the ALEKS input tools called the **Answer Editor** (Fig. A.3). Online help is also available while you are using ALEKS; just click the ? button next to the input tools when you are working in ALEKS. This will give you access to the various sections of the Tools Tutorial.

A.4 Knowledge Checks

Instruction through ALEKS is guided by a precise understanding of your knowledge of the ALEKS class material. This information is obtained by Knowledge Checks in which ALEKS asks you to solve a series of problems. (ALEKS's estimate of your knowledge is also updated when you make progress in the Learning Mode.) Your Initial Knowledge Check occurs immediately after the ALEKS Tools Tutorial.

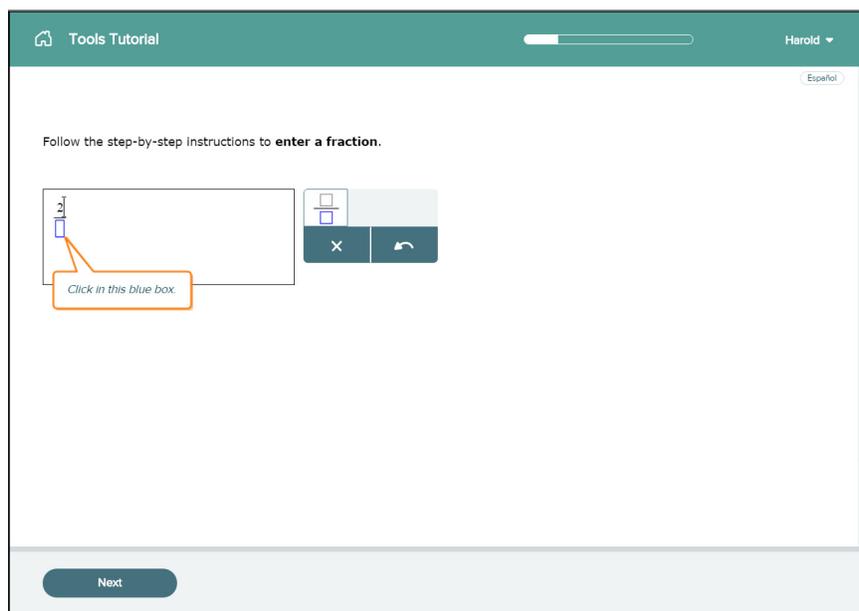


Figure A.3: The Answer Editor

A.4.1 Knowledge Checks in ALEKS

The Initial Knowledge Check determines which class topics you already have mastery of, which topics are not currently mastered, and which topics you are ready to learn. When the Initial Knowledge Check is completed ALEKS will display your unique knowledge state and individualized learning path.

Additional Knowledge Checks may be scheduled for you by your instructor. These may or may not need to be supervised, depending on the instructor's preference. ALEKS also prompts for automatic Knowledge Checks when you have spent a certain amount of time in ALEKS or have made a certain amount of progress (Fig. A.4).

NOTE. Your instructor may require that the Initial Knowledge Check be taken under supervision. **Don't try to begin your Initial Knowledge Check at home until you find out where your instructor wants you to take it.**

A.4.2 Knowledge Check Results

Upon completion of your Initial Knowledge Check you will see your ALEKS Pie along with quick tips that describe how it works and how to use it. The ALEKS Pie will display the number of topics mastered per pie slice and the overall mastery percent in the class based on the Initial Knowledge Check. Clicking on an individual pie slice will give specific information about the topics in that slice.

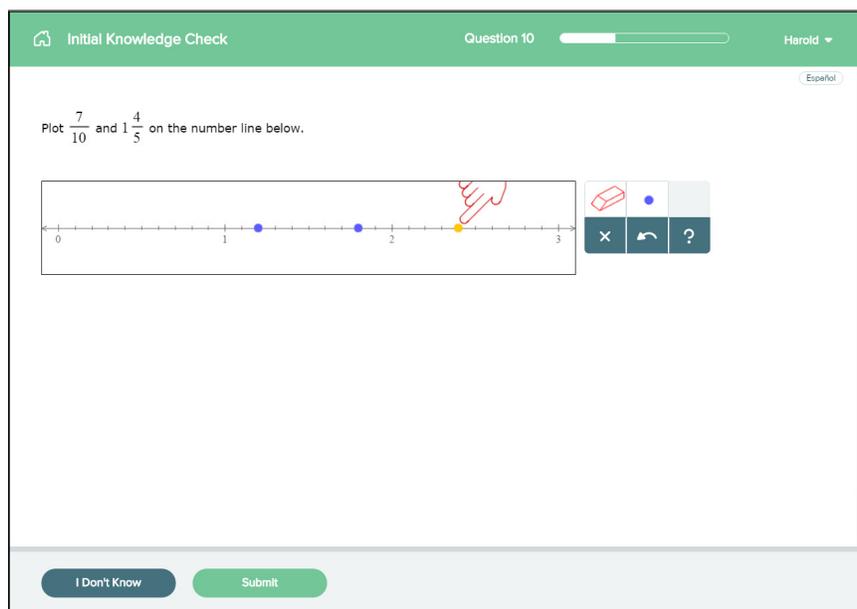


Figure A.4: Knowledge Check

A.4.3 Knowledge Checks and Your Learning

The purpose of Knowledge Checks in ALEKS is to throughout your learning path to confirm that you have retained material previously learned and to provide review and reinforcement when it is needed. New Knowledge Checks occur at regular intervals (typically 20 new topics learned or 10 hours in the system), or after the completion or due date of an Objective. Note that any new Knowledge Check “resets the clock,” so that they don’t occur one after another.

You can see when your next Knowledge Check is coming up by clicking on the Knowledge Check icon on your Home page, next to the Timeline/ALEKS Pie switch. When it is time for the Knowledge Check, you will see a notification, and you will have 24 hours to begin it (the exact period may be different if your instructor sets it differently for your class). Before beginning the Knowledge Check, you may wish to review by clicking on **Review for Knowledge Check**; this option appears under the Knowledge Check notification and on your Primary Guidance Menu.

It is important to make your best effort on the Knowledge Check! Do not rush or work when tired; remember you can always break off and resume the Knowledge Check later. As always, only use the **I don’t know** button when you have no idea of the answer; it’s always better to try to respond if you possibly can, since “I don’t know” is counted as “incorrect.” Note that you are likely to get at least a couple of questions that you haven’t learned yet, due to the adaptive nature of the Knowledge Check mechanism.

Needs More Practice. It is also normal to lose some topics from your mastery count on a Knowledge Check. This simply means that those topics need additional

reinforcement; in most cases you will add them back quickly. ALEKS will present these topics in the beginning of the Topic Carousel under **Needs More Practice**.

A.5 Home

The first time you enter your ALEKS Home page you will be guided through an introduction giving a brief description of how ALEKS works. There are also pop-ups and animations that appear when you are seeing something in ALEKS for the first time, to ensure that you understand the interface and know how to use it.

The Home page includes some important information such as the name of the ALEKS class, progress bar, notifications, Main Navigation Menu (Sec. A.5.4), account Settings (Sec. A.5.5), Primary Guidance Menu (Sec. A.5.3), and next Knowledge Check indicator.

The Home page shows the Timeline by default (Sec. A.5.1), but you can switch to the ALEKS Pie view (Sec. A.5.2) to see your progress within each slice. The view last selected will appear as your Home Page the next time you log in.

At any point in ALEKS, you can click on the Home symbol or ALEKS icon in the upper left corner to return to the Home page.

A.5.1 ALEKS Timeline

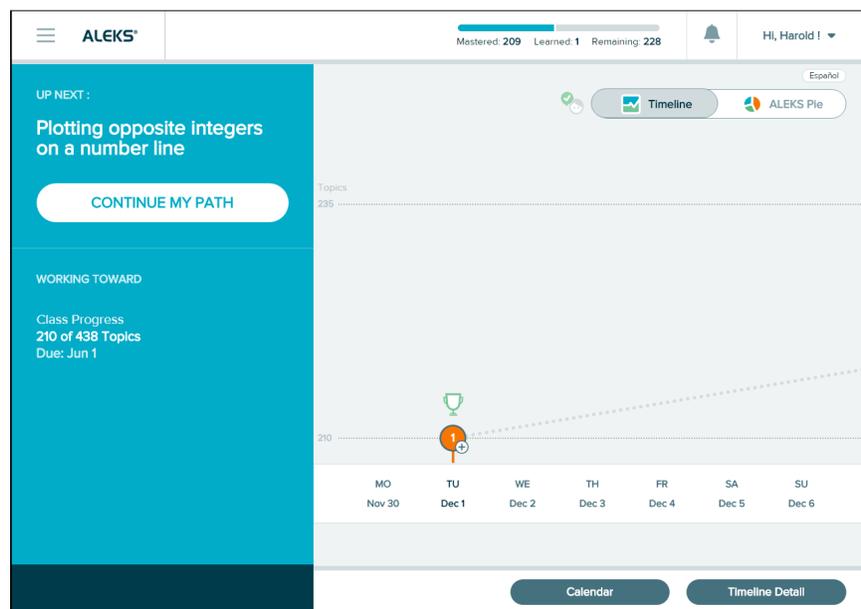


Figure A.5: ALEKS Timeline

The ALEKS Timeline is a visual tool that graphs your progress and growth over time. It helps you understand how to achieve learning goals and reach milestones. You can use the timeline to view what you worked on in the past, what's ahead, and when topics are due next so you can plan your class accordingly. As you learn or lose topics, the timeline is updated with real-time information.

Some key points about the timeline:

- The timeline is intended to show information at a macro level. You can select points on the graph to access information. For example, the blue goal topic marker is a projection to show what you are working towards next.
- The orange marker displays your progress today, and the number of topics you have left to reach the next goal on the timeline. It also shows what was completed on that day.
- The area below the timeline contains assignments created by the instructor, showing when the assignments start and end. You can select the assignment name to view detailed information. When there are multiple assignments available, they are stacked and prioritized by due dates.

You can select the **Timeline Detail** button to see a more detailed full-screen view and a longer time range than what is displayed on the Home page. You can filter the timeline by day, week, or month.

Timeline Icons	Past	Present/ Future	Timeline Icons	Past	Present/ Future
Objective Icons			Assignment (Homework)		
Goal (Topic)			Assignment (Quiz)		
Goal (Time)			Assignment (Test)		
Goal (Mastery)			Assignment (External)		
Knowledge Check			Assignment Worksheet		
QuickTables			Next Knowledge Check Indicator		

Figure A.6: Timeline Icons

For a key to the icons that may appear on the timeline, see Fig. A.6.

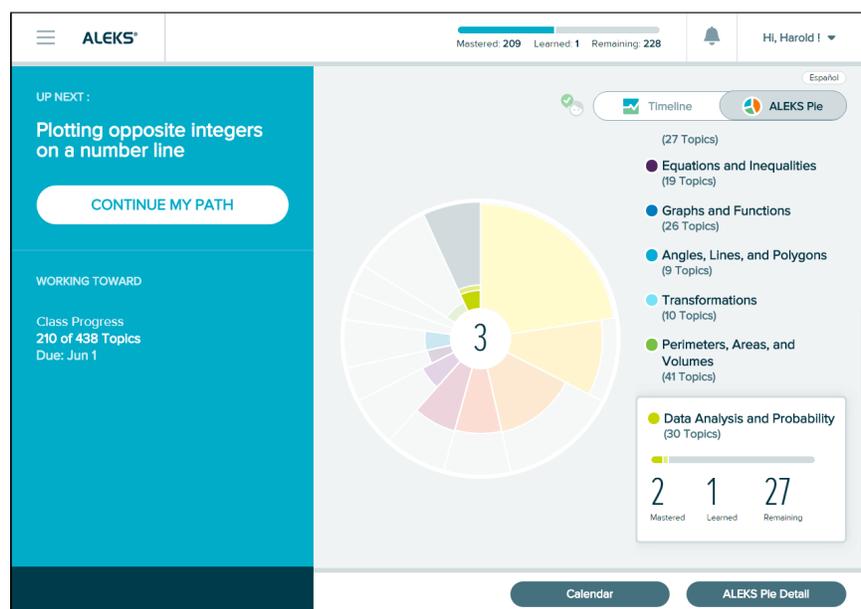


Figure A.7: ALEKS Pie

A.5.2 ALEKS Pie and Details

The ALEKS Pie view is an alternate Home page. You can switch back and forth between the Pie view and the Timeline; whichever you looked at last will appear as your Home page on your next login.

The ALEKS Pie allows you to see your overall progress toward completion of the class. Slices represent topic categories. Mastered, learned, and remaining topics are shown in different colors within each slice. Each pie slice is color-coded to match the list next to the ALEKS Pie. The darker color in the slice represents topics mastered, the lighter color represents topics learned, and the outer space without color represents the topics remaining to be learned and mastered (Fig. A.7).

You can view your progress in real time by selecting a pie slice. The area to the right is a legend that displays the slice name and the number of topics mastered, learned, and remaining in each category for the slice selected.

Mastered

The number of topics you have demonstrated mastery of in a Knowledge Check.

Learned

The number of topics that you have practiced successfully in Learning Mode but have not yet confirmed through a Knowledge Check.

Remaining

The number of topics you have left to learn.

The number in the middle of the ALEKS Pie is a counter that represents the total number of topics you have mastered or learned.

You can also click on the **ALEKS Pie Detail** button to see your class progress broken down by the topics that you are ready to learn, have learned, and have mastered in each slice. Category headings can be expanded to view progress and sample problems. The drop-down menu at the top of the report displays progress in Knowledge Checks. You can use this drop-down to track how they have performed across all Knowledge Checks in their class.

A.5.3 Primary Guidance Menu

The blue bar area on the left-hand side of the Home page is called the Primary Guidance Menu. This menu will show you the next topic in your path. You will also see your class progress and any upcoming assignments.

The Primary Guidance Menu displays the following features:

UP NEXT

This section contains buttons such as **START MY PATH/CONTINUE MY PATH** to direct you to Learning Mode to practice problems that are Ready to Learn. The **GET STARTED/CONTINUE** button begins or continues an assignment.

WORKING TOWARD

This section displays goals and what the student is working toward, including due dates.

WORK ON SOMETHING ELSE

This section contains class assignments as they become available to work on.

A.5.4 Main Navigation Menu

The ALEKS Navigation Menu located in the upper-left corner of your screen provides easy access to features in the Student Module. Depending on your ALEKS class, you will see some or all of the following menu options displayed:

- Assignments (Sec. A.9)
- Worksheet
- Calendar
- Gradebook (Sec. A.10)
- Reports (Sec. A.8)
- Message Center (Sec. A.7)
- Class Forum

- Dictionary
- Instructor Resources
- QuickTables (Sec. A.12)
- Manage My Classes (Secs. A.11.1 and A.11.2)

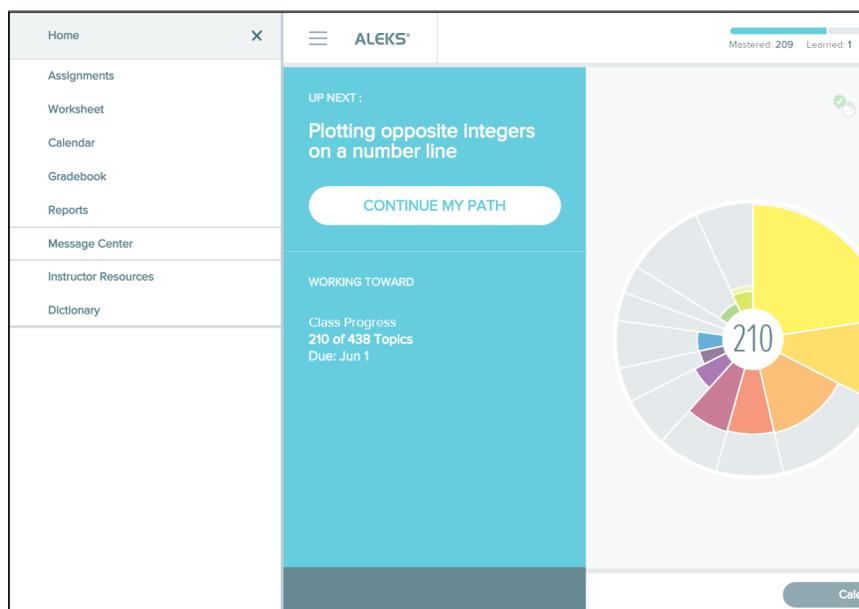


Figure A.8: Main Navigation Menu

When the menu is open, you can return to the Home page by selecting Home or by clicking the **X**. (Fig. A.8).

A.5.5 Settings

You can access your account settings and log out of ALEKS by selecting the down arrow in the upper-right corner by your name. On the Settings page, you have the option to have ALEKS messages forwarded to your email address; if you did not provide one during Registration, you can put it in now.

A.6 Learning Mode

In Learning Mode you can practice Ready to Learn topics and review previously learned and mastered topics. To access Learning Mode, go to the Primary Guidance Menu and select **START MY PATH**.

A.6.1 Learning Page/Problem Page/Explanation Page

QUESTION

A new model of shirt at the clothing store comes in 4 colors:
black, white, green, and blue.

There were 14 shirts sold this week. Here they are by color:
blue, green, blue, green, blue, blue, blue, black, white, blue, blue, green, white, blue

Draw the bar graph for these [data](#).

EXPLANATION

We begin by making marks in a tally table. We make one mark for each of the 14 shirts sold.

Color	Tally
black	
white	
green	
blue	

Start

Figure A.9: Learning Page

The following pages are available in Learning Mode:

Learning Page

The ALEKS Learning Page provides a sample problem for the current topic, with detailed explanation and answer (Fig. A.9). After reviewing the Learning Page, select the **Start** button to move to the first problem.

Problem Page

The ALEKS Problem Page displays a problem for the current topic. Enter your answer in the space provided and then select the **Check** button at the bottom of the screen. If your answer is correct, ALEKS will display the message **Correct** on the screen. If your answer is incorrect, you will be given the opportunity to correct the answer and then select the **re-check** button.

Explain Page

If you are not sure how to answer a problem, you can click on the **Explanation** button at the bottom of the screen. This will take you to the Explanation page showing detailed information about how to solve the problem. For some topics an **Additional Explanation** link will be available showing another method of solving the problem.

Resources

Resources on the right hand side of the Problem Pages and Explain Pages are provided to help you solve the problem. These may include tools such as a calculator,

an eBook link, the ALEKS dictionary, and the Message Center.

A.6.2 Progress Indicator

Mastery of problems is based on a point system: one point added for a correct answer, two points added for two correct in a row without using the Explanation page, and one point subtracted for an incorrect answer. The number of points cannot go below zero. ALEKS considers a topic learned when a student earns a total of five points for that topic. The bars in the progress indicator represent how many points you have earned for the current topic (top right of the Learning Page). The progress bars change color to show how the topic is going: green to show success, yellow, orange, and red to indicate difficulty.

A.6.3 Topic Carousel

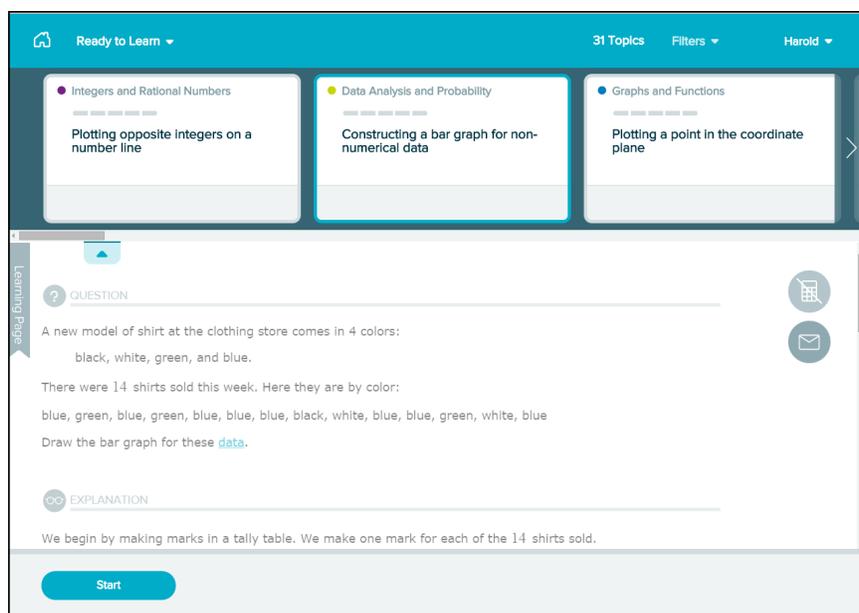


Figure A.10: Topic Carousel

In Learning Mode you can access the Topic Carousel by selecting the downward arrow tab in the upper left corner of your screen (Fig. A.10). The Carousel lists topics that you are currently ready to learn, sorted by degree of difficulty or complexity, with the most accessible first. Each topic has its own card containing the slice name, the topic name, and attributes (if any) indicated by icons (Fig. A.11). The Topic Carousel shows three cards at a time and is scrolled using the scroll bar or the back/forward arrows.

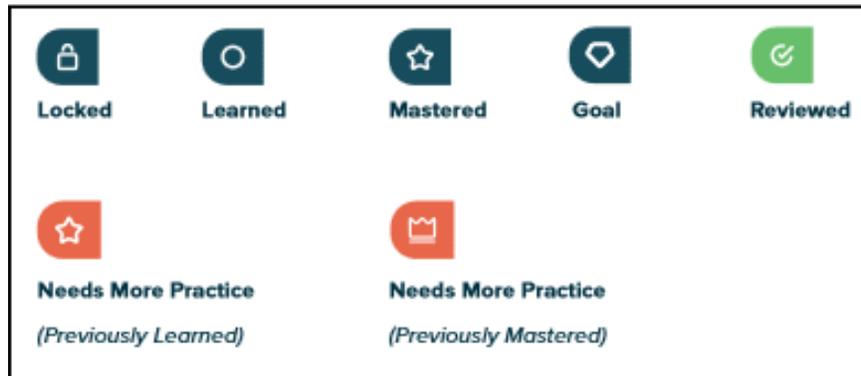


Figure A.11: Topic Icons

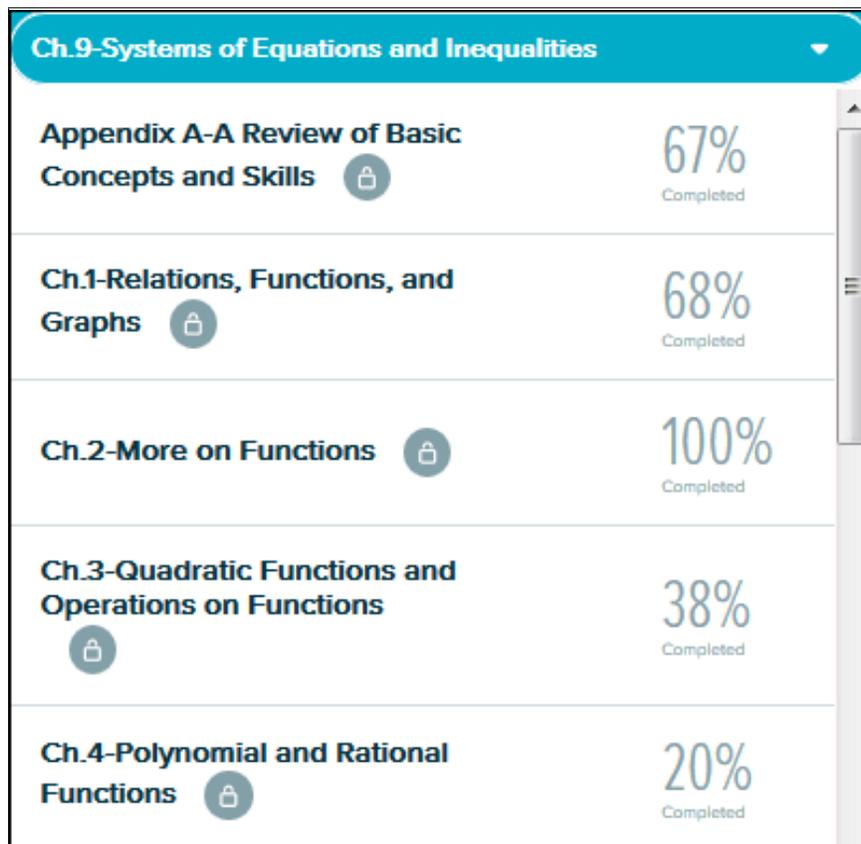


Figure A.12: Objectives/Ready to Learn Drop-Down Menu

Filters

You can filter topics by selecting **Filters** in the upper right corner of the screen (Fig. A.10). The Filters feature lets you search for topics by name and type.

Switching Topics

You can switch topics at any time by selecting a new topic card in the Topic Carousel. When you select a card, a sample problem is previewed in the bottom half of the window. Switching topics mid-way through a topic will not cause you to lose work; when you return to the topic, ALEKS will resume where you left off.

Objectives/Ready to Learn Drop-Down Menu

The drop-down menu above the Topic Carousel allows you to see progress in Objectives (if used in the class) or Ready to Learn pie slices. To see this drop-down menu, select the Ready to Learn/Objectives drop-down menu in the upper left (Fig. A.12).

Review

You can review previously-learned topics by choosing **Review** (rather than **Ready to Learn**) in the filter. Note that you will also be prompted to review when you receive the notification for a new Knowledge Check (Sec. A.4.3).

A.6.4 Classes with Objectives

Objectives are sections of the material in your class, similar to chapters in a textbook or units or modules in a lecture course. If your ALEKS class uses Objectives, they will be in a definite order and you will need to work through them in that order. They may have individual due dates, or there may be one due date for all the Objectives; the following paragraphs explain how the Objectives work on both cases. Note that when the next Objective begins, you will be notified by tool tips appearing on the Home page and in the Topic Carousel.

Objectives with Due Dates

In Learning Mode, the Topic Carousel will display Ready to Learn topics in the current Objective. If you complete the current Objective before the scheduled due date, you will move into Open Pie Mode, which unlocks all Ready to Learn topics until the start of the next Objective. During this time, you can return to previous Objectives and work on topics you did not learn or may have lost during a Knowledge Check. For example, if you missed an Objective, did not complete all topics in an Objective by the due date, or lost topics from previous Objectives in a Knowledge Check, you can go back to the previous Objectives and learn or re-learn those topics. After you learn all topics in a given Objective, the Topic Carousel will be empty. You can select another Objective to work on from the Objectives drop-down menu, or use the review filter to practice previously learned and mastered topics in the selected Objective.

Objectives with One Final Due Date

In Learning Mode, the Topic Carousel will display Ready to Learn topics in the current Objective. The Objectives drop-down menu conveniently displays the breakdown for the number of topics that must be learned to complete the current Objective. Future Objectives are locked. Completing the current Objective at the level specified by your instructor (e.g., 90%) will unlock the next Objective.

A.6.5 Locked Topics

Some topics that appear in the Topic Carousel may be locked. This occurs when there is one or more prerequisite topic that must be learned prior to attempting the topic. A lock icon appears in the topic card to distinguish the locked topics.

A.7 Message Center

The Message Center allows you to send messages to your instructor if you need assistance with a topic or problem in ALEKS. To compose a message, click the Navigation Menu in the upper left corner of your screen. Next, click the **Message Center** link and select the **Compose** button to create an email.

To include mathematical notation and illustrations:

1. Click the **Math** or **Graphs** tab at the right end of the tool bar. This switches you to the Enhanced message editor, with a robust set of math input tools.
2. Click on the **Graphs** tab for graphing tools, or on **Algebra**, **Trig**, **Matrix**, or **Stat** for symbolism specific to these areas.

While working in the Learning Mode, you can send a specific problem to your instructor for assistance. This will include a link in the message, showing a screenshot of the practice problem that you see on your screen.

To attach a specific problem, with the problem on the screen:

1. Click on the **Envelope** icon (located on the right-hand side of the screen). This will take you into the ALEKS Message Center. The system will automatically be in the **Compose** mode.
2. Fill in the **Subject** line and any details you want included in your message.
3. Below the body message section, the system will automatically check the box next to **Attach Page** to include the current problem. Uncheck this box if you don't want the page attached to your message.
4. Click on the **Send** button to send the message.

You can also include attachments of up to 2MB in your messages.

A.8 Reports

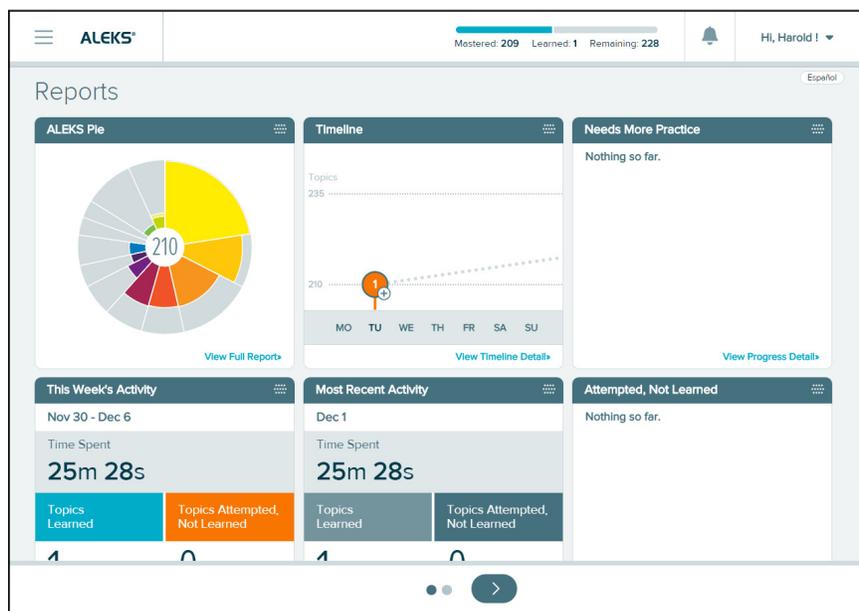


Figure A.13: Report Dashboard

You can access a wide range of reports in your ALEKS account by selecting the Main Navigation Menu in the upper left corner and then selecting **Reports**.

The Report dashboard displays quick overviews of important data applicable to your progress in ALEKS (Fig. A.13). You can move the tiles around by selecting the icon in the upper-right corner of a tile. Selecting **View Full Report** on a tile will give you more detailed information about that report.

Reports that may be available in your account include:

- ALEKS Pie (Sec. A.5.2)
- Timeline (Sec. A.5.1)
- Progress History (Sec. A.8.1)
- Time and Topic Report (Sec. A.8.2)
- Objective Details Report (Sec. A.8.3)
- QuickTables Report (Sec. A.8.4)

A.8.1 Progress History

This report shows your progress on Knowledge Checks and in Learning Mode. Clicking on the **Current Class** tab shows the progress for the current class. Clicking on the **All Classes** tab shows the progress for all classes that you have been enrolled in.

- The dark blue bar shows the content mastered based on your most recent Knowledge Check.
- The light blue bar shows progress made in Learning Mode since your last Knowledge Check.
- The gray bar shows the content remaining to be learned.

A.8.2 Time and Topic Report

This report gives a daily breakdown of time spent in ALEKS. The view can be adjusted to a weekly, monthly, or cumulative view or to a specific date range.

- Hover over a bar to see how much time was spent and which topics were attempted and learned on a given day.
- Select a bar to view the Learning Sequence Log, which shows the sequence of actions you followed to learn the topic, including the exact problems practiced and the answers entered.
- Select the magnifying glass icon to see the answer that you entered with the correct answer if different.

A.8.3 Objective Details Report

This report helps you track your progress towards Objective completion for classes set up to use Objectives. The report displays goal topics, prerequisite topics, and locked topics (topics not yet Ready to Learn). You can scroll through the Carousel to view details on past, current, or future objectives.

A.8.4 QuickTables Report

This report shows your progress in QuickTables (Sec. A.12) based on Knowledge Checks and Learning Mode. The report displays the following information:

- The total time spent in Quicktables since completion of the typing tutorial.
- The last login date.
- The date the last Knowledge Check was completed.

A.9 Assignments

The Assignments link on the Navigation Menu allows you to view all current, upcoming, and past assignments in your class. Assignments are displayed in a table that includes

The screenshot shows the 'Assignments' page with a table of assignments. The table has columns for Name, Type, Start, Due, Score, and Details. It is divided into two sections: 'Upcoming' and 'Current & Past'.

Name	Type	Start	Due	Score	Details
Upcoming					
Progress Goal #2	Progress Goal	-	07/15/2015 11:59 PM	-	
Test 2 - Evaluation of Ratios	Test	06/27/2015 1:04 PM	06/30/2015 11:59 PM	-	1 of 1 Remaining
Current & Past					
Progress Goal #1	Progress Goal	-	06/30/2015 11:59 PM	99%	
Test 1 - Fractions	Test	06/19/2015 10:56 AM	06/19/2015 11:59 PM	100% <small>100%</small>	0 of 1 Remaining

Figure A.14: Assignments

the assignment type, start date, due date, score, and details about the specific assignment. Assignments are sorted by due date. Assignments can be started by selecting an assignment name. ALEKS indicates when assignments are **In Progress** or **Saved for Later**; clicking on such assignments lets you pick up where you left off. Clicking on an assignment score (for assignments that have been completed) will display detailed information about that assignment (Fig. A.14).

A.10 Gradebook

The screenshot shows the 'Gradebook' page with a table of assignments. The table has columns for Name, Type, Due, Grade, and Points. It is divided into a 'Current & Past' section.

Name	Type	Due	Grade	Points
Current & Past				
Chapter 1	Objective	09/30/2015 11:59 PM	100%	
Chapter 2	Objective	09/30/2015 11:59 PM	91%	
Chapter 3	Objective	09/30/2015 11:59 PM	84%	
Progress Goal #1	Progress Goal	06/30/2015 11:59 PM	99%	
Test 1 - Fractions	Test	06/19/2015 11:59 PM	100%	

Figure A.15: Student Gradebook

The ALEKS Gradebook allows you to check your overall grade in the class as well as individual assignment scores. The Gradebook link will be available on the Navigation Menu for classes where the Gradebook has been enabled. Selecting the Gradebook link displays assignments in your ALEKS class, e.g., tests, quizzes, and Objectives. You

can click on the Filters drop-down to customize the Gradebook display to show specific assignment types (Fig. A.15).

A.11 Student Account Home

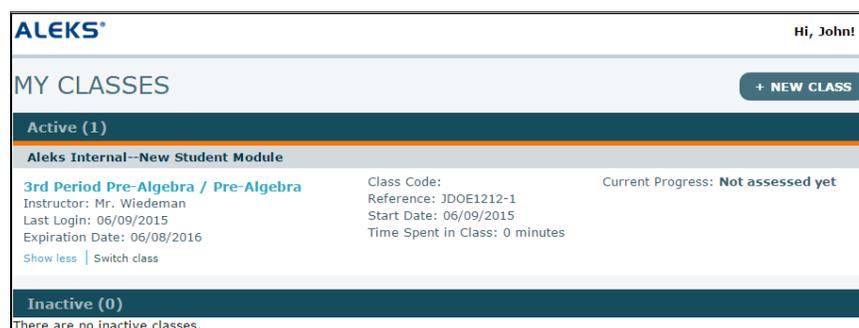


Figure A.16: Student Account Home Main Screen

The Student Account Home groups all your ALEKS accounts under one profile with one Login Name and Password. When you log on to ALEKS, you will go directly to your currently active class unless there is more than one. If for any reason you have more than one active class, you will come to the Student Account Home, where you can click on the name of the class you wish to work in now.

The Student Account Home lists your current and past ALEKS classes, and includes options to sign up for new classes, switch classes, download summary reports, and continue working on an expired account as an independent user.

A.11.1 Account Management

When you log in to your ALEKS account, you arrive at the Student Account Home main screen.

Active Classes

All classes in which you have an active account will be listed here. You will see the name of the class, the name of the instructor, the date you last logged in to the account, and the date your access to the class will expire. Additional information can be accessed by clicking on the **Show more** link, including the Class Code, the Reference ID for the account, the date the account was started, the amount of time spent in the class, and the current level of progress.

Accessing a Class

You can access an active class by clicking on the class name. You will be taken to your Home page for that class and will be able to work on topics. To return

to the Student Account Home main screen, click on your name in the upper right corner and select the **Account home** option. To completely log out, choose the **Log out** option after clicking on your name.

Inactive Classes

The INACTIVE section will display a list of your classes that are no longer active. The same class information that is displayed in the ACTIVE courses is available here.

Adding a New Class

You can add a new class by clicking on the **+ NEW CLASS** button (Fig. A.16). You will be prompted to enter the class code for the new class. Once the new class has been added, it will be displayed in the ACTIVE section on the Student Account Home main page, along with any other active courses.

+ NEW CLASS creates a new account in a new class, using a new subscription; it does not transfer your current subscription to a different class. To transfer a currently active subscription to a different class (and set the previously active account to inactive), use **Switch class** (below, Sec. A.11.2).

Account Settings

To access your account settings, click on your name in the upper right corner of the Student Account Home main screen, and select **Account settings**. The pop-up window displays information both for the profile account and for the school that you attend. This information includes your name, Student ID number, and the email address linked to the account. The email address is the only editable entry. To return to the main screen, click on the **Save** button (if changes were made to the email address) or on the **Cancel** link.

A.11.2 Class Management

Different options are available, depending on whether a class is ACTIVE, INACTIVE, or Pending Instructor Authorization:

ACTIVE Class Options

The following options are available for ACTIVE classes:

Switch class. You can switch to a new class by entering a new class code. When you do this, the new class will become active and the previously active class will normally appear under INACTIVE (depending on the instructor's configuration of the class). If the new class uses the same course product or a closely related course product to the one you were in previously, your progress will be carried over; otherwise, a new Initial Knowledge Check will be required.

To begin a new class with a new subscription, leaving the current class active, use **+ NEW CLASS** (above, Sec. A.11.1).

INACTIVE Class Options

The following options are available for INACTIVE classes:

Summary Report. Clicking on this link will give you access to a PDF report displaying the pie chart and learning history progress achieved in the inactive class.

Continue this class on your own. You can continue your work in an inactive class as an independent user by clicking on the **Activate** link and following the prompts for purchase and registration. This option should only be used if you wish to use ALEKS independently; it will not allow you to continue within the regular school class you were previously enrolled in.

Pending Instructor Authorization

The following option is available for classes where you are waiting for your instructor to authorize your enrollment:

Switch class. If your instructor had you register your ALEKS account through the ALEKS website, using a class code, you may see your account pending authorization the first time you log in. If you mistakenly enrolled into the wrong class, you can switch into the correct class using the **Switch class** link and the class code of the class you need to move into.

A.12 QuickTables

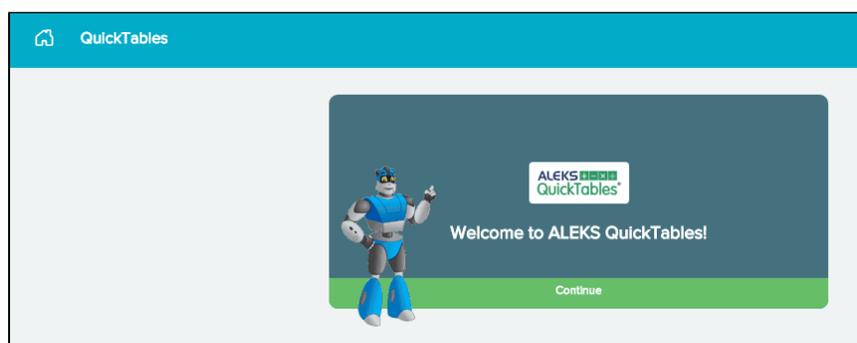


Figure A.17: ALEKS QuickTables

QuickTables is a special tool in ALEKS for learning the math facts of Addition, Subtraction, Multiplication, and Division. It is available where needed as a component in ALEKS classes or as a separate class in ALEKS.

When you log in to an ALEKS class where QuickTables is enabled, you will see the **QuickTables** link in the Main Navigation Menu. Clicking on this link will switch you into the QuickTables environment (Fig. A.17).

The first time you use QuickTables, you will have a short training session before starting to practice. The purpose of the training is to make sure that you are comfortable typing and entering numbers in ALEKS. There will be a series of quick drills in which you are asked to type numbers that appear on the screen. If you make a mistake, QuickTables

will stop to let you correct it. You can enter the numbers by pressing either your computer's Enter key or the Space bar (the long bar at the bottom of the keyboard).

You will need to enter the numbers quickly; QuickTables wants you to learn the math facts so well that you can answer easily and smoothly. If you prefer to click numbers using the onscreen keypad, contact your instructor to turn on this feature.

After this training, you will begin a Knowledge Check of what you know now about the math facts. Do not be anxious about this Knowledge Check; just relax and do your best. The results of the Knowledge Check will tell QuickTables where you should start off in your math facts table. **This Initial Knowledge Check must be finished in one login session. Logging out before it is complete will require restarting the test.**

You may have more than one table set up. If so, you will see different tabs on your screen with the names of the tables: Addition, Subtraction, Multiplication, Division. Simply click on the tab for the table you wish to work in. You will need to take a brief Knowledge Check when you first start working in any table.

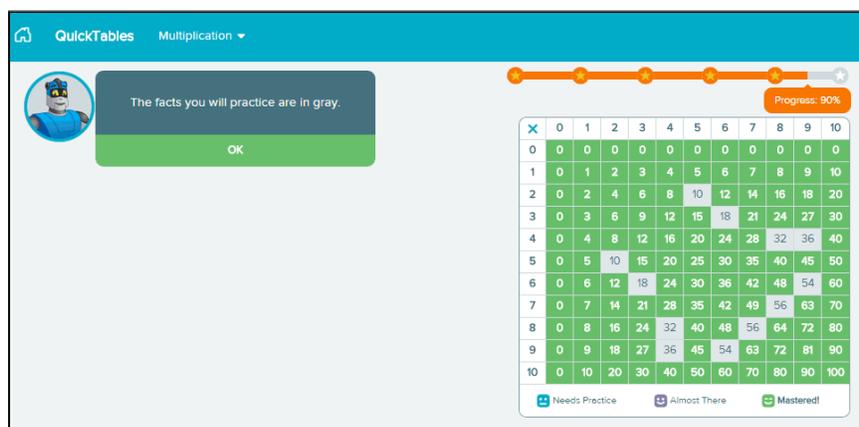


Figure A.18: QuickTables Learning Display

Once you finish the test, you will see a colored display that shows all the facts in the table (Fig. A.18). The colors in the cells show whether you have learned that fact, and how well you know it. In general, you will see that the colors fill in through the table diagonally, from the top left corner down. The **hardest** facts are the ones you get to last, in the lower right-hand corner.

Above the table is a Progress bar that gives your overall percentage of the table. Notice that there are gold stars on the bar. Every time you reach one of these stars, there will be a new game for you to play. You earn access to the games by the progress that you make filling in your table. Any time you want to play a game that you have earned, click on the **Games** link top right. These are fun games that give you extra practice on the math facts that you have been learning.

NOTE. You will only be able to use QuickTables for a certain amount of time on any day, and only a certain number of times per week. These limits are set for the best possible progress in learning and remembering math facts.

Appendix B

Programs in ALEKS

B.1 Arithmetic - 3

Whole Numbers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith128 Adding or subtracting 10, 100, or 1000
arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith635 Adding a 2-digit number and a 1-digit number with carry
arith001 Addition without carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith660 Finding the value of a collection of coins
arith661 Finding the value of a collection of bills and coins
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
arith675 Understanding multiplication of a one-digit number with a larger number
arith003 Multiplication without carry
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith632 Multiplication with trailing zeros: Problem type 1
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith639 Using multiplication to find the number of squares
arith640 Using addition and multiplication to count the objects on a grid
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2

arith075 Division facts
 arith052 Division without carry
 arith005 Division with carry
 arith680 Division with trailing zeros: Problem type 1
 arith649 Division with trailing zeros: Problem type 2
 arith650 Division involving quotients with intermediate zeros
 arith616 Quotient and remainder: Problem type 1
 arith644 Word problem on quotient and remainder
 arith617 Quotient and remainder: Problem type 2
 arith631 Quotient and remainder: Problem type 3
 arith614 Word problem with multiplication or division of whole numbers
 arith023 Word problem with division of whole numbers and rounding
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith651 Introduction to inequalities
 arith077 Ordering large numbers
 arith078 Rounding to tens or hundreds
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith677 Estimating a product
 arith678 Estimating a quotient
 arith645 Introduction to parentheses
 arith681 Introduction to order of operations
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith646 Even and odd numbers
 arith647 Divisibility rules for 2, 5, and 10
 arith648 Divisibility rules for 3 and 9
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith653 Fact families for addition and subtraction
 arith654 Fact families for multiplication and division
 alge807 Finding the next terms of a sequence with whole numbers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith618 Addition or subtraction of fractions with the same denominator
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith088 The reciprocal of a number
 arith079 Product of a unit fraction and a whole number
 arith119 Introduction to fraction multiplication
 arith086 Product of a fraction and a whole number: Problem type 1

arith053 Fraction multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith022 Fraction division
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith076 Mixed number multiplication: Problem type 2
arith068 Mixed number division

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith670 Converting a decimal to a fraction: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith672 Converting a decimal to a mixed number
arith223 Converting a mixed number to a decimal
arith668 Addition with money
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith669 Subtraction with money
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
arith083 Division of a decimal by a power of ten
arith081 Division of a decimal by a whole number
arith019 Division of a decimal by a 2-digit decimal
arith629 Word problem with multiple decimal operations: Problem type 2

Measurement and Geometry

mstat033 Measuring length to the nearest inch
mstat034 Measuring length to the nearest quarter or half inch
unit005 U.S. Customary unit conversion with whole number values
unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
mstat035 Conversions involving measurements in feet and inches
mstat036 Adding measurements in feet and inches
unit001 Metric distance conversion with whole number values
unit002 Metric mass or capacity conversion with whole number values

unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 time010 Telling time
 unit012 Time unit conversion with whole number values
 time008 Reading a calendar
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 arith063 Word problem with clocks
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 arith103 Average of two numbers
 mstat001 Mean of a data set
 geom866 Perimeter and area on a grid
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom016 Circumference of a circle
 geom802 Circumference and area of a circle
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom031 Surface area of a cube or a rectangular prism

Proportions and Percents

arith663 Writing ratios for real-world situations
 arith064 Solving a word problem on proportions using a unit rate
 arith045 Word problem with powers of ten
 arith122 Word problem on rates
 arith073 Word problem with inverse proportion
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith069 Writing a ratio as a percentage without a calculator
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith120 Word problem on percentage: Problem type 2
 arith121 Word problem on percentage: Problem type 3
 arith232 Finding simple interest without a calculator

Signed Numbers and Exponents

mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3

arith231 Integer multiplication and division
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith116 Signed fraction addition or subtraction: Basic
 arith105 Signed fraction multiplication: Advanced
 arith104 Operations with absolute value: Problem type 2
 arith233 Introduction to exponents
 arith683 Power of 10: Positive exponent
 arith684 Power of 10: Negative exponent
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 arith047 Evaluating expressions with exponents: Problem type 1
 arith049 Evaluating expressions with exponents: Problem type 2
 arith600 Order of operations with integers and exponents
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith093 Simplifying the square root of a whole number less than 100
 arith094 Cube root of an integer
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced

B.2 Arithmetic - 4

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith128 Adding or subtracting 10, 100, or 1000
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith001 Addition without carry
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 arith640 Using addition and multiplication to count the objects on a grid
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 arith642 Multiples: Problem type 2
 arith075 Division facts
 arith052 Division without carry
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 arith649 Division with trailing zeros: Problem type 2
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 arith121 Word problem on percentage: Problem type 3
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 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
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 arith234 Signed decimal addition and subtraction with 3 numbers
 arith116 Signed fraction addition or subtraction: Basic
 arith105 Signed fraction multiplication: Advanced
 arith104 Operations with absolute value: Problem type 2
 arith233 Introduction to exponents
 arith683 Power of 10: Positive exponent
 arith684 Power of 10: Negative exponent
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 arith047 Evaluating expressions with exponents: Problem type 1
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 arith600 Order of operations with integers and exponents
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 arith093 Simplifying the square root of a whole number less than 100
 arith094 Cube root of an integer
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B.3 Arithmetic - 5

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
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 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith635 Adding a 2-digit number and a 1-digit number with carry
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 arith050 Addition with carry
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 arith661 Finding the value of a collection of bills and coins
 arith636 Subtracting a 1-digit number from a 2-digit number
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 arith682 Subtraction with multiple regrouping steps

arith637 Subtraction and regrouping with zeros
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arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
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arith638 Multiplication with trailing zeros: Problem type 2
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arith640 Using addition and multiplication to count the objects on a grid
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arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
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arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith653 Fact families for addition and subtraction
arith654 Fact families for multiplication and division
alge807 Finding the next terms of a sequence with whole numbers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions

arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith618 Addition or subtraction of fractions with the same denominator
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith088 The reciprocal of a number
arith079 Product of a unit fraction and a whole number
arith119 Introduction to fraction multiplication
arith086 Product of a fraction and a whole number: Problem type 1
arith053 Fraction multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith022 Fraction division
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith076 Mixed number multiplication: Problem type 2
arith068 Mixed number division

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith670 Converting a decimal to a fraction: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith672 Converting a decimal to a mixed number
arith223 Converting a mixed number to a decimal
arith668 Addition with money
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith669 Subtraction with money
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
arith083 Division of a decimal by a power of ten
arith081 Division of a decimal by a whole number
arith019 Division of a decimal by a 2-digit decimal

arith629 Word problem with multiple decimal operations: Problem type 2

Measurement and Geometry

mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 time010 Telling time
 unit012 Time unit conversion with whole number values
 time008 Reading a calendar
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 arith063 Word problem with clocks
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 arith103 Average of two numbers
 mstat001 Mean of a data set
 geom866 Perimeter and area on a grid
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom016 Circumference of a circle
 geom802 Circumference and area of a circle
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom031 Surface area of a cube or a rectangular prism

Proportions and Percents

arith663 Writing ratios for real-world situations
 arith064 Solving a word problem on proportions using a unit rate
 arith045 Word problem with powers of ten
 arith122 Word problem on rates
 arith073 Word problem with inverse proportion
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith069 Writing a ratio as a percentage without a calculator
 arith074 Finding the sale price without a calculator given the original price and percent discount

arith120 Word problem on percentage: Problem type 2
 arith121 Word problem on percentage: Problem type 3
 arith232 Finding simple interest without a calculator

Signed Numbers and Exponents

mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith231 Integer multiplication and division
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith116 Signed fraction addition or subtraction: Basic
 arith105 Signed fraction multiplication: Advanced
 arith104 Operations with absolute value: Problem type 2
 arith233 Introduction to exponents
 arith683 Power of 10: Positive exponent
 arith684 Power of 10: Negative exponent
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 arith047 Evaluating expressions with exponents: Problem type 1
 arith049 Evaluating expressions with exponents: Problem type 2
 arith600 Order of operations with integers and exponents
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith093 Simplifying the square root of a whole number less than 100
 arith094 Cube root of an integer
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced

B.4 Arithmetic - 6

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith128 Adding or subtracting 10, 100, or 1000
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith001 Addition without carry

arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith660 Finding the value of a collection of coins
arith661 Finding the value of a collection of bills and coins
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
arith675 Understanding multiplication of a one-digit number with a larger number
arith003 Multiplication without carry
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith632 Multiplication with trailing zeros: Problem type 1
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith639 Using multiplication to find the number of squares
arith640 Using addition and multiplication to count the objects on a grid
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith052 Division without carry
arith005 Division with carry
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith650 Division involving quotients with intermediate zeros
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith614 Word problem with multiplication or division of whole numbers
arith023 Word problem with division of whole numbers and rounding
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith651 Introduction to inequalities
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith653 Fact families for addition and subtraction
arith654 Fact families for multiplication and division

alge807 Finding the next terms of a sequence with whole numbers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith618 Addition or subtraction of fractions with the same denominator
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith088 The reciprocal of a number
arith079 Product of a unit fraction and a whole number
arith119 Introduction to fraction multiplication
arith086 Product of a fraction and a whole number: Problem type 1
arith053 Fraction multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith022 Fraction division
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith076 Mixed number multiplication: Problem type 2
arith068 Mixed number division

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith670 Converting a decimal to a fraction: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith672 Converting a decimal to a mixed number
arith223 Converting a mixed number to a decimal
arith668 Addition with money
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith669 Subtraction with money
arith626 Word problem with one decimal operation: Problem type 1

arith627 Word problem with one decimal operation: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith083 Division of a decimal by a power of ten
 arith081 Division of a decimal by a whole number
 arith019 Division of a decimal by a 2-digit decimal
 arith629 Word problem with multiple decimal operations: Problem type 2

Measurement and Geometry

mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 time010 Telling time
 unit012 Time unit conversion with whole number values
 time008 Reading a calendar
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 arith063 Word problem with clocks
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 arith103 Average of two numbers
 mstat001 Mean of a data set
 geom866 Perimeter and area on a grid
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom016 Circumference of a circle
 geom802 Circumference and area of a circle
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom031 Surface area of a cube or a rectangular prism

Proportions and Percents

arith663 Writing ratios for real-world situations
 arith064 Solving a word problem on proportions using a unit rate
 arith045 Word problem with powers of ten

arith122 Word problem on rates
 arith073 Word problem with inverse proportion
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith069 Writing a ratio as a percentage without a calculator
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith120 Word problem on percentage: Problem type 2
 arith121 Word problem on percentage: Problem type 3
 arith232 Finding simple interest without a calculator

Signed Numbers and Exponents

mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith231 Integer multiplication and division
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith116 Signed fraction addition or subtraction: Basic
 arith105 Signed fraction multiplication: Advanced
 arith104 Operations with absolute value: Problem type 2
 arith233 Introduction to exponents
 arith683 Power of 10: Positive exponent
 arith684 Power of 10: Negative exponent
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 arith047 Evaluating expressions with exponents: Problem type 1
 arith049 Evaluating expressions with exponents: Problem type 2
 arith600 Order of operations with integers and exponents
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith093 Simplifying the square root of a whole number less than 100
 arith094 Cube root of an integer
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced

B.5 MS RtI Screening Assessment

Whole Numbers

arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2

arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith635 Adding a 2-digit number and a 1-digit number with carry
arith001 Addition without carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
arith003 Multiplication without carry
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith632 Multiplication with trailing zeros: Problem type 1
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith052 Division without carry
arith005 Division with carry
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith614 Word problem with multiplication or division of whole numbers
arith651 Introduction to inequalities
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols

Fractions

arith623 Introduction to fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith044 Ordering fractions with the same denominator
arith092 Using a common denominator to order fractions
arith687 Fractional position on a number line
arith618 Addition or subtraction of fractions with the same denominator
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication

arith053 Fraction multiplication
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry

Decimals

arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith670 Converting a decimal to a fraction: Basic
arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
arith222 Converting a fraction to a terminating decimal
arith624 Addition of aligned decimals
arith668 Addition with money
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith669 Subtraction with money
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith628 Word problem with multiple decimal operations: Problem type 1
arith083 Division of a decimal by a power of ten
arith081 Division of a decimal by a whole number
arith019 Division of a decimal by a 2-digit decimal
arith629 Word problem with multiple decimal operations: Problem type 2

Geometry

geom303 Acute, obtuse, and right angles
geom306 Acute, obtuse, and right triangles
geom001 Finding an angle measure of a triangle given two angles
geom300 Perimeter of a square or a rectangle
geom339 Perimeter of a polygon
geom221 Finding the missing length in a figure
geom019 Area of a square or a rectangle
geom217 Finding the side length of a rectangle given its perimeter or area
geom022 Area of a parallelogram
geom016 Circumference of a circle
geom311 Volume of a rectangular prism
geom354 Volume of a rectangular prism made of unit cubes

Measurement and Data

mstat035 Conversions involving measurements in feet and inches
mstat036 Adding measurements in feet and inches
unit005 U.S. Customary unit conversion with whole number values
unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
unit001 Metric distance conversion with whole number values
unit002 Metric mass or capacity conversion with whole number values

unit034 Converting between metric and U.S. Customary unit systems
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 mstat005 Constructing a bar graph for non-numerical data
 mstat037 Constructing a line plot
 mstat056 Interpreting a tally table
 mstat057 Interpreting a pictograph table
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set

Proportions, Percents, and Probability

arith663 Writing ratios for real-world situations
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith074 Finding the sale price without a calculator given the original price and percent discount
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat042 Interpreting a Venn diagram of 2 sets

Algebra

mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith231 Integer multiplication and division
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge797 Multiplicative property of equality with integers
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge281 Function tables with one-step rules
 alge282 Function tables with two-step rules
 alge278 Reading a point in quadrant 1
 alge067 Plotting a point in the coordinate plane
 alge280 Graphing a line in quadrant 1
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent

arith702 Exponents and integers: Problem type 1

B.6 LV3

Place Value and Money

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith660 Finding the value of a collection of coins
arith661 Finding the value of a collection of bills and coins

Addition and Subtraction

arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith635 Adding a 2-digit number and a 1-digit number with carry
arith001 Addition without carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith128 Adding or subtracting 10, 100, or 1000
arith613 Word problem with addition or subtraction of whole numbers
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith653 Fact families for addition and subtraction
arith655 Introduction to properties of addition
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge009 Additive property of equality with whole numbers

Multiplication and Division

arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
arith675 Understanding multiplication of a one-digit number with a larger number
arith003 Multiplication without carry
arith004 Multiplication with carry
arith632 Multiplication with trailing zeros: Problem type 1
arith126 Multiplication as repeated addition

arith639 Using multiplication to find the number of squares
 arith640 Using addition and multiplication to count the objects on a grid
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith075 Division facts
 arith052 Division without carry
 arith005 Division with carry
 arith680 Division with trailing zeros: Problem type 1
 arith650 Division involving quotients with intermediate zeros
 arith616 Quotient and remainder: Problem type 1
 arith644 Word problem on quotient and remainder
 arith617 Quotient and remainder: Problem type 2
 arith614 Word problem with multiplication or division of whole numbers
 arith677 Estimating a product
 arith678 Estimating a quotient
 arith645 Introduction to parentheses
 arith658 Filling in missing operations to make an equation
 arith654 Fact families for multiplication and division
 arith656 Introduction to properties of multiplication
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge813 Introduction to solving an equation with multiplication or division
 arith056 Factors
 arith646 Even and odd numbers
 arith647 Divisibility rules for 2, 5, and 10
 alge807 Finding the next terms of a sequence with whole numbers
 alge281 Function tables with one-step rules
 mstat061 Describing an increasing or decreasing pattern from a table of values

Geometry, Measurement, and Graphs

geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom303 Acute, obtuse, and right angles
 geom361 Naming polygons
 geom306 Acute, obtuse, and right triangles
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom866 Perimeter and area on a grid
 geom019 Area of a square or a rectangle
 geom867 Identifying parallelograms, rectangles, and squares
 geom868 Classifying solids
 geom354 Volume of a rectangular prism made of unit cubes
 geom348 Vertices, edges, and faces of a solid
 geom219 Nets of solids
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom357 Identifying transformations
 geom334 Drawing lines of symmetry
 alge732 Finding patterns in shapes
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat062 Reading a positive temperature from a thermometer
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 unit001 Metric distance conversion with whole number values

unit002 Metric mass or capacity conversion with whole number values
 time010 Telling time
 time008 Reading a calendar
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time011 Introduction to elapsed time
 alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 mstat056 Interpreting a tally table
 mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat057 Interpreting a pictograph table
 mstat037 Constructing a line plot
 mstat007 Interpreting a line graph
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat055 Finding the mode and range of a data set
 mstat040 Introduction to the counting principle
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event

Fractions and Decimals

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith618 Addition or subtraction of fractions with the same denominator
 arith079 Product of a unit fraction and a whole number
 arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith670 Converting a decimal to a fraction: Basic
 arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith668 Addition with money
 arith625 Subtraction of aligned decimals
 arith669 Subtraction with money
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2

B.7 LV4

Number Sense, Addition, and Subtraction

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1

arith060 Numeral translation: Problem type 2
 arith651 Introduction to inequalities
 arith077 Ordering large numbers
 arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith001 Addition without carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith636 Subtracting a 1-digit number from a 2-digit number
 arith007 Subtraction without borrowing
 arith006 Subtraction with borrowing
 arith128 Adding or subtracting 10, 100, or 1000
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith653 Fact families for addition and subtraction
 arith655 Introduction to properties of addition

Multiplication and Division

arith008 One-digit multiplication
 arith679 Multiplication by 10, 100, and 1000
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith003 Multiplication without carry
 arith004 Multiplication with carry
 arith632 Multiplication with trailing zeros: Problem type 1
 arith126 Multiplication as repeated addition
 arith639 Using multiplication to find the number of squares
 arith640 Using addition and multiplication to count the objects on a grid
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith615 Introduction to multiplication of large numbers
 arith638 Multiplication with trailing zeros: Problem type 2
 arith014 Multiplication of large numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith075 Division facts
 arith052 Division without carry
 arith005 Division with carry
 arith680 Division with trailing zeros: Problem type 1
 arith650 Division involving quotients with intermediate zeros
 arith616 Quotient and remainder: Problem type 1
 arith644 Word problem on quotient and remainder
 arith617 Quotient and remainder: Problem type 2
 arith614 Word problem with multiplication or division of whole numbers
 arith631 Quotient and remainder: Problem type 3
 arith649 Division with trailing zeros: Problem type 2
 arith023 Word problem with division of whole numbers and rounding
 arith677 Estimating a product
 arith678 Estimating a quotient
 arith645 Introduction to parentheses
 arith681 Introduction to order of operations
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols

arith657 Understanding the distributive property
 arith652 Comparing a numerical expression with a number
 arith654 Fact families for multiplication and division
 arith658 Filling in missing operations to make an equation
 arith656 Introduction to properties of multiplication
 alge807 Finding the next terms of a sequence with whole numbers
 arith646 Even and odd numbers
 arith647 Divisibility rules for 2, 5, and 10
 arith648 Divisibility rules for 3 and 9
 arith056 Factors
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith034 Prime numbers
 arith035 Prime factorization

Fractions, Time, and Customary Measurement

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith618 Addition or subtraction of fractions with the same denominator
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 time010 Telling time
 unit012 Time unit conversion with whole number values
 time008 Reading a calendar
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat062 Reading a positive temperature from a thermometer
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion

Decimals, Money, and Metric Measurement

arith660 Finding the value of a collection of coins
 arith661 Finding the value of a collection of bills and coins
 arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith221 Rounding decimals
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith670 Converting a decimal to a fraction: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
 arith672 Converting a decimal to a mixed number
 arith624 Addition of aligned decimals
 arith668 Addition with money
 arith013 Decimal addition with 3 numbers
 arith625 Subtraction of aligned decimals
 arith669 Subtraction with money
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith131 Estimating a decimal sum or difference
 arith674 Finding the percentage of a grid that is shaded
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values

Geometry

geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom361 Naming polygons
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom866 Perimeter and area on a grid
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom869 Estimates and exact answers
 alge732 Finding patterns in shapes
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom311 Volume of a rectangular prism
 geom354 Volume of a rectangular prism made of unit cubes
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom219 Nets of solids
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid

geom355 Introduction to translations
 geom356 Introduction to reflections
 geom357 Identifying transformations
 geom334 Drawing lines of symmetry

Algebra, Graphs, and Probability

mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat037 Constructing a line plot
 mstat056 Interpreting a tally table
 mstat057 Interpreting a pictograph table
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat054 Classifying likelihood
 mstat039 Understanding likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat042 Interpreting a Venn diagram of 2 sets
 arith699 Writing a signed number for a real-world situation
 mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge009 Additive property of equality with whole numbers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge733 Writing a one-step expression for a real-world situation
 alge281 Function tables with one-step rules
 alge282 Function tables with two-step rules
 mstat061 Describing an increasing or decreasing pattern from a table of values
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge283 Graphing whole number functions
 alge280 Graphing a line in quadrant 1

B.8 LV5

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros

arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith635 Adding a 2-digit number and a 1-digit number with carry
arith001 Addition without carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith660 Finding the value of a collection of coins
arith661 Finding the value of a collection of bills and coins
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith128 Adding or subtracting 10, 100, or 1000
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
arith675 Understanding multiplication of a one-digit number with a larger number
arith003 Multiplication without carry
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith632 Multiplication with trailing zeros: Problem type 1
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith126 Multiplication as repeated addition
arith639 Using multiplication to find the number of squares
arith640 Using addition and multiplication to count the objects on a grid
arith075 Division facts
arith052 Division without carry
arith005 Division with carry
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith650 Division involving quotients with intermediate zeros
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith023 Word problem with division of whole numbers and rounding
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith103 Average of two numbers
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10

arith648 Divisibility rules for 3 and 9
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith655 Introduction to properties of addition
 arith656 Introduction to properties of multiplication
 arith657 Understanding the distributive property
 arith653 Fact families for addition and subtraction
 arith654 Fact families for multiplication and division
 arith658 Filling in missing operations to make an equation
 alge807 Finding the next terms of a sequence with whole numbers

Fractions and Proportions

arith623 Introduction to fractions
 arith663 Writing ratios for real-world situations
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith618 Addition or subtraction of fractions with the same denominator
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith085 Addition or subtraction of mixed numbers with different denominators
 arith020 Mixed number multiplication: Problem type 1
 arith076 Mixed number multiplication: Problem type 2
 arith068 Mixed number division
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge272 Solving a proportion of the form $x/a = b/c$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 unit034 Converting between metric and U.S. Customary unit systems

Decimals and Percents

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith221 Rounding decimals
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith609 Ordering fractions and decimals
 arith670 Converting a decimal to a fraction: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith672 Converting a decimal to a mixed number
 arith223 Converting a mixed number to a decimal
 arith624 Addition of aligned decimals
 arith668 Addition with money
 arith013 Decimal addition with 3 numbers
 arith625 Subtraction of aligned decimals
 arith669 Subtraction with money
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith131 Estimating a decimal sum or difference
 arith082 Multiplication of a decimal by a power of ten
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith045 Word problem with powers of ten
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith083 Division of a decimal by a power of ten
 arith081 Division of a decimal by a whole number
 arith019 Division of a decimal by a 2-digit decimal
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith232 Finding simple interest without a calculator

Geometry and Measurement

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom159 Constructing congruent angles
 geom158 Constructing an angle bisector
 geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom154 Constructing the perpendicular bisector of a line segment
 geom361 Naming polygons
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom801 Area of a triangle
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom870 Sum of the angle measures of a quadrilateral
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals

geom532 Classifying parallelograms
geom300 Perimeter of a square or a rectangle
geom339 Perimeter of a polygon
geom078 Sides of polygons having the same perimeter
geom221 Finding the missing length in a figure
geom353 Perimeter of a piecewise rectangular figure
geom866 Perimeter and area on a grid
geom019 Area of a square or a rectangle
geom217 Finding the side length of a rectangle given its perimeter or area
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom340 Area of a piecewise rectangular figure
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom347 Introduction to a circle: Diameter, radius, and chord
geom016 Circumference of a circle
geom802 Circumference and area of a circle
geom869 Estimates and exact answers
alge732 Finding patterns in shapes
geom868 Classifying solids
geom354 Volume of a rectangular prism made of unit cubes
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom031 Surface area of a cube or a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom219 Nets of solids
geom348 Vertices, edges, and faces of a solid
geom816 Side views of a solid made of cubes
geom359 Identifying congruent shapes on a grid
geom360 Identifying similar or congruent shapes on a grid
geom037 Similar polygons
geom355 Introduction to translations
geom356 Introduction to reflections
geom357 Identifying transformations
geom334 Drawing lines of symmetry
mstat058 Choosing a measuring tool
mstat059 Choosing U.S. Customary measurement units
mstat062 Reading a positive temperature from a thermometer
mstat033 Measuring length to the nearest inch
mstat034 Measuring length to the nearest quarter or half inch
mstat035 Conversions involving measurements in feet and inches
mstat036 Adding measurements in feet and inches
unit005 U.S. Customary unit conversion with whole number values
unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
mstat060 Choosing metric measurement units
mstat063 Measuring length to the nearest centimeter
mstat064 Measuring length to the nearest millimeter
unit001 Metric distance conversion with whole number values
unit002 Metric mass or capacity conversion with whole number values
unit003 Metric distance conversion with decimal values
unit004 Metric conversion with decimal values: Two-step problem
time010 Telling time
time008 Reading a calendar
unit012 Time unit conversion with whole number values
time009 Introduction to adding time
time006 Adding time
time011 Introduction to elapsed time
time007 Elapsed time

Algebra and Graphs

mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat037 Constructing a line plot
 mstat056 Interpreting a tally table
 mstat057 Interpreting a pictograph table
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 mstat031 Interpreting a stem-and-leaf plot
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat029 How changing a value affects the mean and median
 mstat025 Finding if a question can be answered by the data
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 stat106 Outcomes and event probability
 mstat054 Classifying likelihood
 mstat039 Understanding likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 arith699 Writing a signed number for a real-world situation
 mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith605 Plotting rational numbers on a number line
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge733 Writing a one-step expression for a real-world situation
 alge602 Writing a one-step variable expression for a real-world situation
 alge016 Translating a sentence into a one-step equation
 alge009 Additive property of equality with whole numbers
 alge010 Additive property of equality with integers
 alge800 Additive property of equality with decimals
 alge801 Additive property of equality with fractions and mixed numbers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge803 Using two steps to solve an equation with whole numbers
 alge281 Function tables with one-step rules
 alge282 Function tables with two-step rules
 mstat061 Describing an increasing or decreasing pattern from a table of values
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge278 Reading a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge279 Plotting a point in quadrant 1
 alge067 Plotting a point in the coordinate plane

alge283 Graphing whole number functions
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith693 Order of operations with whole numbers and exponents: Basic
 arith683 Power of 10: Positive exponent
 arith036 Scientific notation with positive exponent
 arith016 Square root of a perfect square

B.9 Essential Mathematics

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith001 Addition without carry
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith636 Subtracting a 1-digit number from a 2-digit number
 arith007 Subtraction without borrowing
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith653 Fact families for addition and subtraction
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith008 One-digit multiplication
 arith639 Using multiplication to find the number of squares
 arith679 Multiplication by 10, 100, and 1000
 arith003 Multiplication without carry
 arith004 Multiplication with carry
 arith632 Multiplication with trailing zeros: Problem type 1
 arith615 Introduction to multiplication of large numbers
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith638 Multiplication with trailing zeros: Problem type 2
 arith014 Multiplication of large numbers
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith075 Division facts
 arith654 Fact families for multiplication and division
 arith614 Word problem with multiplication or division of whole numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
 arith243 Division of whole numbers given in fractional form
 arith711 Division involving zero
 arith052 Division without carry
 arith005 Division with carry
 arith901 Whole number division: 2-digit by 2-digit, no remainder

arith902 Whole number division: 3-digit by 2-digit, no remainder
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge813 Introduction to solving an equation with multiplication or division
alge008 Multiplicative property of equality with whole numbers
alge016 Translating a sentence into a one-step equation
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle

geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid

Decimals

arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith714 Writing a decimal number less than 1 given its name
arith715 Writing a decimal number greater than 1 given its name
arith716 Writing a decimal number given its name: Advanced
arith829 Reading decimal position on a number line: Tenths
arith830 Reading decimal position on a number line: Hundredths
arith831 Understanding decimal position on a number line using zoom: Hundredths
arith832 Understanding decimal position on a number line using zoom: Thousandths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith221 Rounding decimals
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith668 Addition with money
arith669 Subtraction with money
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith127 Writing a decimal and a fraction for a shaded region
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith733 Using a calculator to convert a fraction to a rounded decimal
arith111 Converting a mixed number to a terminating decimal: Basic

arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith513 Identifying rational decimal numbers
 arith821 Exponents and fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge281 Function tables with one-step rules
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion

unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup

arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
arith232 Finding simple interest without a calculator
arith918 Comparing discounts
arith914 Calculations involving paying for college
arith916 Computing percentages for categories of a budget
arith921 Comparing annual salaries of different occupations
arith911 Calculations involving purchases with debit and credit cards
arith950 Comparing costs of checking accounts
arith951 Balancing a check register
arith912 Reading a credit report
arith913 Understanding the impact of a credit score

Integers and Rational Numbers

alge286 Plotting integers on a number line
mstat038 Reading the temperature from a thermometer
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith605 Plotting rational numbers on a number line
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge790 Evaluating expressions with exponents of zero
arith684 Power of 10: Negative exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
alge660 Identifying equivalent signed fractions

arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 geom525 Computing distances between decimals on the number line
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge001 Identifying numbers as integers or non-integers
 alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge665 Combining like terms: Decimal coefficients
 alge666 Combining like terms: Fractional coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression

Equations and Inequalities

alge800 Additive property of equality with decimals
 alge801 Additive property of equality with fractions and mixed numbers
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge825 Multiplicative property of equality with decimals
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge658 Introduction to solving a rational equation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge014 Solving a word problem with two unknowns using a linear equation

alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge636 Solving a two-step linear inequality with whole numbers
 alge846 Translating a sentence into a multi-step inequality
 alge621 Solving a word problem using a one-step linear inequality
 alge623 Solving a word problem using a two-step linear inequality

Graphs and Functions

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 arith454 Making a table and plotting points given a unit rate
 alge283 Graphing whole number functions
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun001 Table for a linear function
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 mstat007 Interpreting a line graph
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced

alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge263 Interpreting the graphs of two functions
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom519 Identifying and naming congruent parts of congruent triangles
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram

geom870 Sum of the angle measures of a quadrilateral
geom852 The sum of interior angle measures in a convex polygon
arith016 Square root of a perfect square
alge413 Finding all square roots of a number
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge407 Introduction to the Pythagorean Theorem
geom044 Pythagorean Theorem
alge408 Word problem involving the Pythagorean Theorem
geom603 Identifying side lengths that give right triangles

Transformations

geom357 Identifying transformations
geom355 Introduction to translations
geom596 Translating a point and giving its coordinates: One step
geom909 Translating a point and giving its coordinates: Two steps
geom597 Properties of translated figures
geom598 Determining if figures are related by a translation
geom330 Translating a polygon
geom356 Introduction to reflections
arith408 Reflecting a point across an axis
geom533 Reflecting a point across both coordinate axes
geom590 Reflecting a point across an axis and giving its coordinates
arith407 Finding the coordinates of a point reflected across an axis
geom560 Finding the coordinates of a point reflected across both axes
geom534 Reflecting a polygon across the x-axis or y-axis
geom591 Properties of reflected figures
geom592 Determining if figures are related by a reflection
geom332 Reflecting a polygon over a vertical or horizontal line
geom334 Drawing lines of symmetry
geom602 Finding the coordinates of a point reflected across an axis and translated
geom815 Finding an angle of rotation
geom624 Identifying rotational symmetry and angles of rotation
geom593 Rotating a point and giving its coordinates
geom594 Properties of rotated figures
geom595 Determining if figures are related by a rotation
geom335 Rotating a figure about the origin
geom580 Determining if figures are congruent and related by a transformation
geom606 Dilating a segment and giving the coordinates of its endpoints
geom607 The effect of dilation on side length
geom608 Determining if figures are related by a dilation
geom636 The effect of dilation on area

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
geom078 Sides of polygons having the same perimeter
geom221 Finding the missing length in a figure
geom353 Perimeter of a piecewise rectangular figure
alge615 Writing algebraic expressions for the perimeter of a figure
geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom869 Estimates and exact answers
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle

geom217 Finding the side length of a rectangle given its perimeter or area
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom344 Area involving rectangles and triangles
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom537 Finding the perimeter or area of a rectangle in the coordinate plane
geom832 Area of quadrilaterals in the coordinate plane
geom347 Introduction to a circle: Diameter, radius, and chord
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom311 Volume of a rectangular prism
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of π
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom219 Nets of solids
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom555 Distinguishing between surface area and volume
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of π
geom578 Word problem involving the surface area of a cylinder

Data Analysis and Probability

mstat088 Identifying statistical questions
mstat080 Choosing an appropriate method for gathering data: Problem type 1
mstat081 Choosing an appropriate method for gathering data: Problem type 2
mstat056 Interpreting a tally table
mstat097 Constructing a two-way frequency table: Basic
mstat098 Constructing a two-way frequency table: Advanced
mstat049 Computing a percentage from a table of values
mstat087 Making an inference using a two-way frequency table
stat020 Calculating relative frequencies in a contingency table
mstat025 Finding if a question can be answered by the data
mstat037 Constructing a line plot
mstat005 Constructing a bar graph for non-numerical data
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat057 Interpreting a pictograph table
mstat031 Interpreting a stem-and-leaf plot
geom814 Angle measure in a circle graph
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat075 Understanding the mean graphically: Two bars
mstat076 Understanding the mean graphically: Four or more bars
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
mstat078 Comparing measures of center and variation
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat082 Computing mean absolute deviation from a list of numerical values
mstat083 Computing mean absolute deviation from a bar graph
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
mstat054 Classifying likelihood
mstat026 Introduction to the probability of an event

mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events

B.10 MS RtI Tier 3

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith001 Addition without carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith660 Finding the value of a collection of coins
 arith661 Finding the value of a collection of bills and coins
 arith636 Subtracting a 1-digit number from a 2-digit number
 arith007 Subtraction without borrowing
 arith006 Subtraction with borrowing
 arith128 Adding or subtracting 10, 100, or 1000
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 arith008 One-digit multiplication
 arith679 Multiplication by 10, 100, and 1000
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith003 Multiplication without carry
 arith004 Multiplication with carry
 arith615 Introduction to multiplication of large numbers
 arith632 Multiplication with trailing zeros: Problem type 1
 arith638 Multiplication with trailing zeros: Problem type 2
 arith014 Multiplication of large numbers
 arith126 Multiplication as repeated addition
 arith639 Using multiplication to find the number of squares
 arith640 Using addition and multiplication to count the objects on a grid
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith075 Division facts
 arith052 Division without carry
 arith005 Division with carry
 arith680 Division with trailing zeros: Problem type 1
 arith649 Division with trailing zeros: Problem type 2
 arith650 Division involving quotients with intermediate zeros
 arith616 Quotient and remainder: Problem type 1
 arith644 Word problem on quotient and remainder
 arith617 Quotient and remainder: Problem type 2

arith631 Quotient and remainder: Problem type 3
 arith023 Word problem with division of whole numbers and rounding
 arith614 Word problem with multiplication or division of whole numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith651 Introduction to inequalities
 arith652 Comparing a numerical expression with a number
 arith077 Ordering large numbers
 arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith677 Estimating a product
 arith678 Estimating a quotient
 arith645 Introduction to parentheses
 arith681 Introduction to order of operations
 arith048 Order of operations with whole numbers
 arith646 Even and odd numbers
 arith647 Divisibility rules for 2, 5, and 10
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith655 Introduction to properties of addition
 arith656 Introduction to properties of multiplication
 arith653 Fact families for addition and subtraction
 arith654 Fact families for multiplication and division
 alge807 Finding the next terms of a sequence with whole numbers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith618 Addition or subtraction of fractions with the same denominator
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith020 Mixed number multiplication: Problem type 1

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith670 Converting a decimal to a fraction: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
arith222 Converting a fraction to a terminating decimal
arith672 Converting a decimal to a mixed number
arith624 Addition of aligned decimals
arith668 Addition with money
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith669 Subtraction with money
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith131 Estimating a decimal sum or difference
arith082 Multiplication of a decimal by a power of ten
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith628 Word problem with multiple decimal operations: Problem type 1
arith083 Division of a decimal by a power of ten
arith081 Division of a decimal by a whole number
arith019 Division of a decimal by a 2-digit decimal
arith064 Solving a word problem on proportions using a unit rate
arith674 Finding the percentage of a grid that is shaded
arith090 Converting a percentage to a fraction in simplest form
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith030 Finding a percentage of a whole number without a calculator: Basic

Geometry

geom151 Measuring an angle with the protractor
geom303 Acute, obtuse, and right angles
geom306 Acute, obtuse, and right triangles
geom001 Finding an angle measure of a triangle given two angles
geom300 Perimeter of a square or a rectangle
geom339 Perimeter of a polygon
geom221 Finding the missing length in a figure
geom866 Perimeter and area on a grid
geom019 Area of a square or a rectangle
geom350 Distinguishing between the area and perimeter of a rectangle
geom868 Classifying solids
geom311 Volume of a rectangular prism
geom354 Volume of a rectangular prism made of unit cubes
geom219 Nets of solids

Measurement and Data

mstat058 Choosing a measuring tool
mstat059 Choosing U.S. Customary measurement units
mstat062 Reading a positive temperature from a thermometer
mstat033 Measuring length to the nearest inch

mstat035 Conversions involving measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 time010 Telling time
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time011 Introduction to elapsed time
 mstat005 Constructing a bar graph for non-numerical data
 mstat037 Constructing a line plot
 mstat056 Interpreting a tally table
 mstat057 Interpreting a pictograph table
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat031 Interpreting a stem-and-leaf plot
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event

Algebra

mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith231 Integer multiplication and division
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge281 Function tables with one-step rules
 alge282 Function tables with two-step rules
 mstat061 Describing an increasing or decreasing pattern from a table of values
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge280 Graphing a line in quadrant 1
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents

B.11 RtI 6

Whole Numbers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith635 Adding a 2-digit number and a 1-digit number with carry
arith001 Addition without carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith660 Finding the value of a collection of coins
arith661 Finding the value of a collection of bills and coins
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith128 Adding or subtracting 10, 100, or 1000
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
arith675 Understanding multiplication of a one-digit number with a larger number
arith003 Multiplication without carry
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith632 Multiplication with trailing zeros: Problem type 1
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith126 Multiplication as repeated addition
arith639 Using multiplication to find the number of squares
arith640 Using addition and multiplication to count the objects on a grid
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith052 Division without carry
arith005 Division with carry
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith650 Division involving quotients with intermediate zeros
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith023 Word problem with division of whole numbers and rounding
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith103 Average of two numbers
arith645 Introduction to parentheses
arith681 Introduction to order of operations

arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith658 Filling in missing operations to make an equation
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith655 Introduction to properties of addition
arith656 Introduction to properties of multiplication
arith657 Understanding the distributive property
arith653 Fact families for addition and subtraction
arith654 Fact families for multiplication and division
alge807 Finding the next terms of a sequence with whole numbers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith618 Addition or subtraction of fractions with the same denominator
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith076 Mixed number multiplication: Problem type 2
arith068 Mixed number division

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths

arith220 Decimal place value: Hundreds to ten thousandths
 arith221 Rounding decimals
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith609 Ordering fractions and decimals
 arith670 Converting a decimal to a fraction: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith672 Converting a decimal to a mixed number
 arith223 Converting a mixed number to a decimal
 arith624 Addition of aligned decimals
 arith668 Addition with money
 arith013 Decimal addition with 3 numbers
 arith625 Subtraction of aligned decimals
 arith669 Subtraction with money
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith131 Estimating a decimal sum or difference
 arith082 Multiplication of a decimal by a power of ten
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith083 Division of a decimal by a power of ten
 arith081 Division of a decimal by a whole number
 arith019 Division of a decimal by a 2-digit decimal
 arith629 Word problem with multiple decimal operations: Problem type 2

Geometry

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom361 Naming polygons
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom801 Area of a triangle
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom870 Sum of the angle measures of a quadrilateral
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom866 Perimeter and area on a grid
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom340 Area of a piecewise rectangular figure
 geom022 Area of a parallelogram
 geom869 Estimates and exact answers
 alge732 Finding patterns in shapes

geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom802 Circumference and area of a circle
 geom868 Classifying solids
 geom311 Volume of a rectangular prism
 geom354 Volume of a rectangular prism made of unit cubes
 geom090 Volume of a triangular prism
 geom031 Surface area of a cube or a rectangular prism
 geom219 Nets of solids
 geom348 Vertices, edges, and faces of a solid
 geom816 Side views of a solid made of cubes
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom355 Introduction to translations
 geom356 Introduction to reflections
 geom334 Drawing lines of symmetry
 geom357 Identifying transformations

Measurement and Graphs

mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat062 Reading a positive temperature from a thermometer
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit034 Converting between metric and U.S. Customary unit systems
 time010 Telling time
 unit012 Time unit conversion with whole number values
 time008 Reading a calendar
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat037 Constructing a line plot
 mstat056 Interpreting a tally table
 mstat057 Interpreting a pictograph table
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat031 Interpreting a stem-and-leaf plot
 stat803 Finding the value for a new score that will yield a given mean

Proportions, Percents, and Probability

arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith069 Writing a ratio as a percentage without a calculator
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith232 Finding simple interest without a calculator
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 stat106 Outcomes and event probability
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets

Algebra

arith699 Writing a signed number for a real-world situation
 mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith231 Integer multiplication and division
 alge606 Distributive property: Whole number coefficients
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge733 Writing a one-step expression for a real-world situation
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge797 Multiplicative property of equality with integers
 alge803 Using two steps to solve an equation with whole numbers
 alge016 Translating a sentence into a one-step equation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge015 Translating a sentence by using an inequality symbol
 alge019 Solving a linear inequality: Problem type 1
 alge017 Graphing a linear inequality on the number line
 alge281 Function tables with one-step rules
 alge282 Function tables with two-step rules
 mstat061 Describing an increasing or decreasing pattern from a table of values
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge278 Reading a point in quadrant 1

alge064 Reading a point in the coordinate plane
 alge279 Plotting a point in quadrant 1
 alge067 Plotting a point in the coordinate plane
 alge280 Graphing a line in quadrant 1
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith693 Order of operations with whole numbers and exponents: Basic
 arith683 Power of 10: Positive exponent
 arith036 Scientific notation with positive exponent
 arith702 Exponents and integers: Problem type 1
 arith016 Square root of a perfect square

B.12 RtI 7

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith001 Addition without carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith660 Finding the value of a collection of coins
 arith661 Finding the value of a collection of bills and coins
 arith636 Subtracting a 1-digit number from a 2-digit number
 arith007 Subtraction without borrowing
 arith006 Subtraction with borrowing
 arith128 Adding or subtracting 10, 100, or 1000
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 arith008 One-digit multiplication
 arith679 Multiplication by 10, 100, and 1000
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith003 Multiplication without carry
 arith004 Multiplication with carry
 arith615 Introduction to multiplication of large numbers
 arith632 Multiplication with trailing zeros: Problem type 1
 arith638 Multiplication with trailing zeros: Problem type 2
 arith014 Multiplication of large numbers
 arith126 Multiplication as repeated addition
 arith639 Using multiplication to find the number of squares
 arith640 Using addition and multiplication to count the objects on a grid
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith075 Division facts
 arith052 Division without carry
 arith005 Division with carry
 arith680 Division with trailing zeros: Problem type 1
 arith649 Division with trailing zeros: Problem type 2
 arith650 Division involving quotients with intermediate zeros

arith616 Quotient and remainder: Problem type 1
 arith644 Word problem on quotient and remainder
 arith617 Quotient and remainder: Problem type 2
 arith631 Quotient and remainder: Problem type 3
 arith023 Word problem with division of whole numbers and rounding
 arith614 Word problem with multiplication or division of whole numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith651 Introduction to inequalities
 arith652 Comparing a numerical expression with a number
 arith077 Ordering large numbers
 arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith677 Estimating a product
 arith678 Estimating a quotient
 arith103 Average of two numbers
 arith645 Introduction to parentheses
 arith681 Introduction to order of operations
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith658 Filling in missing operations to make an equation
 arith646 Even and odd numbers
 arith647 Divisibility rules for 2, 5, and 10
 arith648 Divisibility rules for 3 and 9
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith655 Introduction to properties of addition
 arith656 Introduction to properties of multiplication
 arith657 Understanding the distributive property
 arith653 Fact families for addition and subtraction
 arith654 Fact families for multiplication and division
 alge807 Finding the next terms of a sequence with whole numbers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith618 Addition or subtraction of fractions with the same denominator
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication

arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith697 Mixed arithmetic operations with fractions
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith085 Addition or subtraction of mixed numbers with different denominators
 arith020 Mixed number multiplication: Problem type 1
 arith076 Mixed number multiplication: Problem type 2
 arith068 Mixed number division

Decimals

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith221 Rounding decimals
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith609 Ordering fractions and decimals
 arith670 Converting a decimal to a fraction: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith672 Converting a decimal to a mixed number
 arith223 Converting a mixed number to a decimal
 arith624 Addition of aligned decimals
 arith668 Addition with money
 arith013 Decimal addition with 3 numbers
 arith625 Subtraction of aligned decimals
 arith669 Subtraction with money
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith131 Estimating a decimal sum or difference
 arith082 Multiplication of a decimal by a power of ten
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith083 Division of a decimal by a power of ten
 arith081 Division of a decimal by a whole number
 arith019 Division of a decimal by a 2-digit decimal
 arith629 Word problem with multiple decimal operations: Problem type 2

Geometry

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom361 Naming polygons

geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom801 Area of a triangle
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom044 Pythagorean Theorem
 geom870 Sum of the angle measures of a quadrilateral
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom866 Perimeter and area on a grid
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom340 Area of a piecewise rectangular figure
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom869 Estimates and exact answers
 alge732 Finding patterns in shapes
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom868 Classifying solids
 geom311 Volume of a rectangular prism
 geom354 Volume of a rectangular prism made of unit cubes
 geom090 Volume of a triangular prism
 geom035 Volume of a cylinder
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom219 Nets of solids
 geom348 Vertices, edges, and faces of a solid
 geom816 Side views of a solid made of cubes
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom355 Introduction to translations
 geom356 Introduction to reflections
 geom334 Drawing lines of symmetry
 geom357 Identifying transformations

Measurement and Graphs

mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat062 Reading a positive temperature from a thermometer
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion

mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit034 Converting between metric and U.S. Customary unit systems
 time010 Telling time
 unit012 Time unit conversion with whole number values
 time008 Reading a calendar
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat037 Constructing a line plot
 mstat056 Interpreting a tally table
 mstat057 Interpreting a pictograph table
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat031 Interpreting a stem-and-leaf plot
 stat803 Finding the value for a new score that will yield a given mean

Proportions, Percents, and Probability

arith663 Writing ratios for real-world situations
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge272 Solving a proportion of the form $x/a = b/c$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith069 Writing a ratio as a percentage without a calculator
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 mstat049 Computing a percentage from a table of values
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 stat106 Outcomes and event probability
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets

Algebra

arith699 Writing a signed number for a real-world situation
mstat038 Reading the temperature from a thermometer
alge286 Plotting integers on a number line
arith691 Ordering integers
arith071 Absolute value of a number
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith118 Order of operations with integers
arith116 Signed fraction addition or subtraction: Basic
arith105 Signed fraction multiplication: Advanced
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
alge001 Identifying numbers as integers or non-integers
alge606 Distributive property: Whole number coefficients
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge733 Writing a one-step expression for a real-world situation
alge602 Writing a one-step variable expression for a real-world situation
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge009 Additive property of equality with whole numbers
alge800 Additive property of equality with decimals
alge801 Additive property of equality with fractions and mixed numbers
alge010 Additive property of equality with integers
alge813 Introduction to solving an equation with multiplication or division
alge008 Multiplicative property of equality with whole numbers
alge797 Multiplicative property of equality with integers
alge803 Using two steps to solve an equation with whole numbers
alge006 Solving a two-step equation with integers
alge016 Translating a sentence into a one-step equation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge015 Translating a sentence by using an inequality symbol
alge019 Solving a linear inequality: Problem type 1
alge017 Graphing a linear inequality on the number line
alge281 Function tables with one-step rules
alge282 Function tables with two-step rules
mstat061 Describing an increasing or decreasing pattern from a table of values
fun005 Writing a function rule given a table of ordered pairs: One-step rules
alge278 Reading a point in quadrant 1
alge064 Reading a point in the coordinate plane
alge279 Plotting a point in quadrant 1
alge067 Plotting a point in the coordinate plane
alge280 Graphing a line in quadrant 1
alge194 Graphing a line given its equation in slope-intercept form
alge198 Graphing a vertical or horizontal line
alge263 Interpreting the graphs of two functions
arith233 Introduction to exponents
arith692 Writing expressions using exponents
arith693 Order of operations with whole numbers and exponents: Basic
arith683 Power of 10: Positive exponent
arith036 Scientific notation with positive exponent
arith702 Exponents and integers: Problem type 1
alge004 Evaluating a quadratic expression: Integers
arith029 Ordering numbers with positive exponents
arith016 Square root of a perfect square
arith602 Estimating a square root

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Whole Numbers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith635 Adding a 2-digit number and a 1-digit number with carry
arith001 Addition without carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith660 Finding the value of a collection of coins
arith661 Finding the value of a collection of bills and coins
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith128 Adding or subtracting 10, 100, or 1000
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
arith675 Understanding multiplication of a one-digit number with a larger number
arith003 Multiplication without carry
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith632 Multiplication with trailing zeros: Problem type 1
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith126 Multiplication as repeated addition
arith639 Using multiplication to find the number of squares
arith640 Using addition and multiplication to count the objects on a grid
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith052 Division without carry
arith005 Division with carry
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith650 Division involving quotients with intermediate zeros
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith023 Word problem with division of whole numbers and rounding
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers

arith677 Estimating a product
 arith678 Estimating a quotient
 arith103 Average of two numbers
 arith645 Introduction to parentheses
 arith681 Introduction to order of operations
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith658 Filling in missing operations to make an equation
 arith646 Even and odd numbers
 arith647 Divisibility rules for 2, 5, and 10
 arith648 Divisibility rules for 3 and 9
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith655 Introduction to properties of addition
 arith656 Introduction to properties of multiplication
 arith657 Understanding the distributive property
 arith653 Fact families for addition and subtraction
 arith654 Fact families for multiplication and division
 alge807 Finding the next terms of a sequence with whole numbers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith618 Addition or subtraction of fractions with the same denominator
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith697 Mixed arithmetic operations with fractions
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith085 Addition or subtraction of mixed numbers with different denominators
 arith020 Mixed number multiplication: Problem type 1
 arith076 Mixed number multiplication: Problem type 2
 arith068 Mixed number division

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith670 Converting a decimal to a fraction: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith672 Converting a decimal to a mixed number
arith223 Converting a mixed number to a decimal
arith624 Addition of aligned decimals
arith668 Addition with money
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith669 Subtraction with money
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith131 Estimating a decimal sum or difference
arith082 Multiplication of a decimal by a power of ten
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
arith083 Division of a decimal by a power of ten
arith081 Division of a decimal by a whole number
arith019 Division of a decimal by a 2-digit decimal
arith629 Word problem with multiple decimal operations: Problem type 2

Geometry

geom151 Measuring an angle with the protractor
geom152 Drawing an angle with the protractor
geom303 Acute, obtuse, and right angles
geom349 Naming segments, rays, and lines
geom358 Identifying parallel and perpendicular lines
geom361 Naming polygons
geom306 Acute, obtuse, and right triangles
geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
geom801 Area of a triangle
geom001 Finding an angle measure of a triangle given two angles
geom908 Finding an angle measure for a triangle with an extended side
geom044 Pythagorean Theorem
geom870 Sum of the angle measures of a quadrilateral
geom867 Identifying parallelograms, rectangles, and squares
geom310 Properties of quadrilaterals
geom300 Perimeter of a square or a rectangle
geom339 Perimeter of a polygon
geom078 Sides of polygons having the same perimeter
geom221 Finding the missing length in a figure
geom353 Perimeter of a piecewise rectangular figure
geom866 Perimeter and area on a grid
geom019 Area of a square or a rectangle
geom350 Distinguishing between the area and perimeter of a rectangle

geom351 Areas of rectangles with the same perimeter
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom340 Area of a piecewise rectangular figure
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom869 Estimates and exact answers
 alge732 Finding patterns in shapes
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom802 Circumference and area of a circle
 geom036 Word problem involving the area between two concentric circles
 geom302 Area involving rectangles and circles
 geom868 Classifying solids
 geom311 Volume of a rectangular prism
 geom354 Volume of a rectangular prism made of unit cubes
 geom090 Volume of a triangular prism
 geom035 Volume of a cylinder
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom219 Nets of solids
 geom348 Vertices, edges, and faces of a solid
 geom816 Side views of a solid made of cubes
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom355 Introduction to translations
 geom356 Introduction to reflections
 geom334 Drawing lines of symmetry
 geom357 Identifying transformations

Measurement and Graphs

mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat062 Reading a positive temperature from a thermometer
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit034 Converting between metric and U.S. Customary unit systems
 time010 Telling time
 unit012 Time unit conversion with whole number values
 time008 Reading a calendar
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time

time007 Elapsed time
 mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat037 Constructing a line plot
 mstat056 Interpreting a tally table
 mstat057 Interpreting a pictograph table
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat053 Choosing the best measure to describe data
 mstat031 Interpreting a stem-and-leaf plot
 stat803 Finding the value for a new score that will yield a given mean

Proportions, Percents, and Probability

arith663 Writing ratios for real-world situations
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge272 Solving a proportion of the form $x/a = b/c$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith069 Writing a ratio as a percentage without a calculator
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 mstat049 Computing a percentage from a table of values
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 stat106 Outcomes and event probability
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets

Algebra

arith699 Writing a signed number for a real-world situation
 mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1

arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith118 Order of operations with integers
arith116 Signed fraction addition or subtraction: Basic
arith105 Signed fraction multiplication: Advanced
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
alge001 Identifying numbers as integers or non-integers
alge606 Distributive property: Whole number coefficients
alge607 Combining like terms: Integer coefficients
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge733 Writing a one-step expression for a real-world situation
alge602 Writing a one-step variable expression for a real-world situation
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge009 Additive property of equality with whole numbers
alge800 Additive property of equality with decimals
alge801 Additive property of equality with fractions and mixed numbers
alge010 Additive property of equality with integers
alge813 Introduction to solving an equation with multiplication or division
alge008 Multiplicative property of equality with whole numbers
alge797 Multiplicative property of equality with integers
alge803 Using two steps to solve an equation with whole numbers
alge006 Solving a two-step equation with integers
alge016 Translating a sentence into a one-step equation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge015 Translating a sentence by using an inequality symbol
alge019 Solving a linear inequality: Problem type 1
alge017 Graphing a linear inequality on the number line
alge281 Function tables with one-step rules
alge282 Function tables with two-step rules
mstat061 Describing an increasing or decreasing pattern from a table of values
fun005 Writing a function rule given a table of ordered pairs: One-step rules
alge278 Reading a point in quadrant 1
alge064 Reading a point in the coordinate plane
alge279 Plotting a point in quadrant 1
alge067 Plotting a point in the coordinate plane
alge066 Finding a solution to a linear equation in two variables
alge280 Graphing a line in quadrant 1
alge194 Graphing a line given its equation in slope-intercept form
alge198 Graphing a vertical or horizontal line
alge263 Interpreting the graphs of two functions
arith233 Introduction to exponents
arith692 Writing expressions using exponents
arith693 Order of operations with whole numbers and exponents: Basic
arith683 Power of 10: Positive exponent
arith684 Power of 10: Negative exponent
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
arith702 Exponents and integers: Problem type 1
arith600 Order of operations with integers and exponents
alge004 Evaluating a quadratic expression: Integers
arith029 Ordering numbers with positive exponents
arith016 Square root of a perfect square
arith602 Estimating a square root

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Whole Numbers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith001 Addition without carry
arith635 Adding a 2-digit number and a 1-digit number with carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith653 Fact families for addition and subtraction
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith639 Using multiplication to find the number of squares
arith679 Multiplication by 10, 100, and 1000
arith003 Multiplication without carry
arith004 Multiplication with carry
arith632 Multiplication with trailing zeros: Problem type 1
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith654 Fact families for multiplication and division
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith052 Division without carry
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds

arith123 Rounding to hundreds or thousands
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith677 Estimating a product
 arith678 Estimating a quotient
 arith692 Writing expressions using exponents
 arith233 Introduction to exponents
 arith683 Power of 10: Positive exponent
 arith645 Introduction to parentheses
 arith865 Comparing numerical expressions with parentheses
 arith681 Introduction to order of operations
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 arith646 Even and odd numbers
 arith647 Divisibility rules for 2, 5, and 10
 arith648 Divisibility rules for 3 and 9
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith516 Greatest common factor of 3 numbers
 arith409 Introduction to the distributive property
 arith657 Understanding the distributive property
 arith410 Introduction to factoring with numbers
 arith411 Factoring a sum or difference of whole numbers
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers
 arith418 Word problem involving the least common multiple of 2 numbers
 arith240 Word problem with common multiples
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge649 Evaluating a formula
 alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge016 Translating a sentence into a one-step equation
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid

Decimals

arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths

arith830 Reading decimal position on a number line: Hundredths
arith831 Understanding decimal position on a number line using zoom: Hundredths
arith832 Understanding decimal position on a number line using zoom: Thousandths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith221 Rounding decimals
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith668 Addition with money
arith669 Subtraction with money
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions

arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith127 Writing a decimal and a fraction for a shaded region
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith733 Using a calculator to convert a fraction to a rounded decimal
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith732 Converting a fraction or mixed number to a rounded decimal
arith609 Ordering fractions and decimals
arith717 Converting a decimal to a proper fraction without simplifying: Basic
arith719 Converting a decimal to a proper fraction without simplifying: Advanced
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced

arith513 Identifying rational decimal numbers
 arith821 Exponents and fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge281 Function tables with one-step rules
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values

time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 arith918 Comparing discounts
 arith914 Calculations involving paying for college
 arith916 Computing percentages for categories of a budget
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards

arith950 Comparing costs of checking accounts
arith951 Balancing a check register
arith912 Reading a credit report
arith913 Understanding the impact of a credit score

Integers and Rational Numbers

alge286 Plotting integers on a number line
mstat038 Reading the temperature from a thermometer
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith605 Plotting rational numbers on a number line
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge790 Evaluating expressions with exponents of zero
arith684 Power of 10: Negative exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
alge660 Identifying equivalent signed fractions
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
geom525 Computing distances between decimals on the number line
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers

alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge001 Identifying numbers as integers or non-integers
 alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge665 Combining like terms: Decimal coefficients
 alge666 Combining like terms: Fractional coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression

Equations and Inequalities

alge800 Additive property of equality with decimals
 alge801 Additive property of equality with fractions and mixed numbers
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge825 Multiplicative property of equality with decimals
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge658 Introduction to solving a rational equation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge014 Solving a word problem with two unknowns using a linear equation
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line
 alge652 Identifying solutions to a one-step linear inequality

alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge636 Solving a two-step linear inequality with whole numbers
 alge846 Translating a sentence into a multi-step inequality
 alge621 Solving a word problem using a one-step linear inequality
 alge623 Solving a word problem using a two-step linear inequality

Graphs and Functions

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 arith454 Making a table and plotting points given a unit rate
 alge283 Graphing whole number functions
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun001 Table for a linear function
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 mstat007 Interpreting a line graph
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge263 Interpreting the graphs of two functions

alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom519 Identifying and naming congruent parts of congruent triangles
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon
 arith016 Square root of a perfect square
 alge413 Finding all square roots of a number
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom603 Identifying side lengths that give right triangles

Transformations

geom357 Identifying transformations
 geom355 Introduction to translations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom356 Introduction to reflections
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane

geom832 Area of quadrilaterals in the coordinate plane
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom311 Volume of a rectangular prism
 geom354 Volume of a rectangular prism made of unit cubes
 geom518 Volume of a solid made of cubes with unit fraction edge lengths
 geom535 Volume of a rectangular prism with fractional edge lengths
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom035 Volume of a cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of π
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of π
 geom578 Word problem involving the surface area of a cylinder

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values

mstat087 Making an inference using a two-way frequency table
stat020 Calculating relative frequencies in a contingency table
mstat025 Finding if a question can be answered by the data
mstat037 Constructing a line plot
mstat005 Constructing a bar graph for non-numerical data
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat057 Interpreting a pictograph table
mstat031 Interpreting a stem-and-leaf plot
geom814 Angle measure in a circle graph
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat075 Understanding the mean graphically: Two bars
mstat076 Understanding the mean graphically: Four or more bars
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
mstat078 Comparing measures of center and variation
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat082 Computing mean absolute deviation from a list of numerical values
mstat083 Computing mean absolute deviation from a bar graph
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
mstat054 Classifying likelihood
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
mstat039 Understanding likelihood
mstat048 Odds of an event
stat106 Outcomes and event probability
mstat011 Area as probability
mstat046 Experimental and theoretical probability
mstat047 Introduction to expectation
mstat012 Probability of independent events
mstat013 Probability of dependent events

B.15 M.S. Math 2

Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors

arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom311 Volume of a rectangular prism
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2

alge009 Additive property of equality with whole numbers
 alge010 Additive property of equality with integers
 alge008 Multiplicative property of equality with whole numbers
 alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 alge660 Identifying equivalent signed fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
 arith509 Modeling multiplication of proper fractions
 arith813 Multiplication of 3 fractions
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith818 Word problem involving fractions and multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith507 Fact families for multiplication and division of fractions
 arith508 Modeling division of a whole number by a fraction
 arith814 Signed fraction division
 arith819 Word problem involving fractions and division
 arith618 Addition or subtraction of fractions with the same denominator
 arith802 Addition or subtraction of fractions with the same denominator and simplification
 alge432 Introduction to adding fractions with variables and common denominators
 arith801 Finding the LCD of two fractions
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith605 Plotting rational numbers on a number line
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry

arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 alge790 Evaluating expressions with exponents of zero
 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

Decimals

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 geom525 Computing distances between decimals on the number line
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1

arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith750 Signed decimal multiplication
 arith135 Word problem with multiplication of a decimal and a whole number
 arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
 arith019 Division of a decimal by a 2-digit decimal
 arith083 Division of a decimal by a power of ten
 arith742 Division of a decimal by a power of 0.1
 arith745 Decimal division with rounding
 arith751 Signed decimal division
 arith136 Word problem with division of a decimal and a whole number
 arith138 Word problem with division of two decimals
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith103 Average of two numbers
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 alge001 Identifying numbers as integers or non-integers
 arith513 Identifying rational decimal numbers
 arith753 Squaring decimal bases: Products greater than 0.1
 arith741 Exponents and decimals: Products less than 0.1
 arith720 Order of operations with decimals: Problem type 1
 arith746 Order of operations with decimals: Problem type 2
 arith747 Order of operations with decimals: Problem type 3
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions

arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded

arith903 Representing benchmark percentages on a grid
arith723 Introduction to converting a percentage to a decimal
arith833 Introduction to converting a decimal to a percentage
arith834 Converting between percentages and decimals
arith841 Converting a mixed number percentage to a decimal
arith835 Converting between percentages and decimals in a real-world situation
arith090 Converting a percentage to a fraction in simplest form
arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith904 Finding benchmark fractions and percentages for a figure
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage
arith842 Converting a fraction to a percentage in a real-world situation
arith840 Finding a percentage of a whole number
arith030 Finding a percentage of a whole number without a calculator: Basic
arith844 Finding a percentage of a whole number without a calculator: Advanced
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith845 Finding a percentage of a total amount: Real-world situations
arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
arith857 Estimating a tip without a calculator
arith069 Writing a ratio as a percentage without a calculator
arith850 Finding the rate of a tax or commission
arith849 Finding the total amount given the percentage of a partial amount
stat805 Making a reasonable inference based on proportion statistics
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith232 Finding simple interest without a calculator
arith853 Introduction to compound interest
arith915 Calculating income tax
arith918 Comparing discounts
arith909 Examining a savings plan for college
arith914 Calculations involving paying for college
arith920 Comparing total costs for attending different colleges
arith922 Distinguishing between fixed and variable expenses
arith916 Computing percentages for categories of a budget
arith919 Computations involving cost of living and hourly wage
arith921 Comparing annual salaries of different occupations
arith911 Calculations involving purchases with debit and credit cards
arith950 Comparing costs of checking accounts
arith951 Balancing a check register
arith912 Reading a credit report
arith913 Understanding the impact of a credit score
arith917 Computing a person's net worth
arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
arith910 Calculating and comparing simple interest and compound interest

Equations and Inequalities

alge647 Identifying like terms
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
arith655 Introduction to properties of addition
alge187 Properties of addition
alge666 Combining like terms: Fractional coefficients
alge665 Combining like terms: Decimal coefficients
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
alge605 Factoring a linear binomial
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
arith656 Introduction to properties of multiplication
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge293 Combining like terms in a quadratic expression
alge436 Adding rational expressions with different denominators and a single occurrence of a variable
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge803 Using two steps to solve an equation with whole numbers
alge266 Additive property of equality with a negative coefficient
alge006 Solving a two-step equation with integers
alge200 Solving an equation to find the value of an expression
alge920 Introduction to solving an equation with parentheses
alge837 Solving a multi-step equation given in fractional form
alge986 Identifying properties used to solve a linear equation
alge824 Solving a two-step equation with signed decimals
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
alge208 Solving a two-step equation with signed fractions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge742 Solving equations with zero, one, or infinitely many solutions
alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge603 Introduction to solving an absolute value equation
alge864 Solving an absolute value equation: Problem type 1
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge016 Translating a sentence into a one-step equation

alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 alge796 Solving a distance, rate, time problem using a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality

Graphing, Functions, and Sequences

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph

alge696 Finding distances between points that share a common coordinate given their coordinates
alge191 Midpoint of a line segment in the plane
alge282 Function tables with two-step rules
alge850 Table for a linear equation
fun005 Writing a function rule given a table of ordered pairs: One-step rules
fun006 Writing a function rule given a table of ordered pairs: Two-step rules
alge873 Identifying solutions to a linear equation in two variables
alge066 Finding a solution to a linear equation in two variables
alge280 Graphing a line in quadrant 1
alge877 Graphing a linear equation of the form $y = mx$
alge878 Graphing a line given its equation in slope-intercept form: Integer slope
alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
alge880 Graphing a line given its equation in standard form
alge198 Graphing a vertical or horizontal line
alge884 Finding x - and y -intercepts given the graph of a line on a grid
alge924 Finding x - and y -intercepts of a line given the equation: Basic
alge210 Finding x - and y -intercepts of a line given the equation: Advanced
alge197 Graphing a line given its x - and y -intercepts
alge881 Graphing a line by first finding its x - and y -intercepts
alge874 Identifying linear functions given ordered pairs
geom358 Identifying parallel and perpendicular lines
mstat007 Interpreting a line graph
arith454 Making a table and plotting points given a unit rate
arith501 Identifying proportional relationships in graphs: Basic
arith502 Identifying proportional relationships in graphs: Advanced
arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
alge699 Comparing proportional relationships given in different forms
alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge814 Using right triangles to find the slope of a line
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y -intercept
alge196 Graphing a line through a given point with a given slope
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
alge828 Interpreting direct variation from a graph
alge905 Writing an inverse variation equation
alge903 Identifying direct and inverse variation equations
alge902 Identifying direct and inverse variation from ordered pairs and writing equations
alge176 Word problem on inverse variation
alge220 Word problem on inverse proportions
alge625 Identifying linear equations: Basic
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y -intercept
alge258 Writing an equation of a line given its slope and y -intercept
alge892 Writing an equation and graphing a line given its slope and y -intercept
alge893 Writing an equation in slope-intercept form given the slope and a point
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge070 Writing an equation of a line given the y -intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations

geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations

alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base
 alge961 Introduction to the product rule with negative exponents
 alge689 Introduction to the quotient rule with negative exponents: Whole number base
 alge755 Quotient rule with negative exponents: Problem type 1
 alge691 Introduction to the power of a power rule with negative exponents: Whole number base
 alge025 Power of a power rule with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot025 Estimating numbers using scientific notation
 scinot020 Choosing metric units and converting to the base unit in scientific notation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced

scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
 scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
 scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
 scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
 scinot017 Estimating the sum or difference of two numbers written in scientific notation
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge032 Squaring a binomial: Univariate
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 arith016 Square root of a perfect square
 arith601 Square root of a rational perfect square
 alge413 Finding all square roots of a number
 arith760 Square roots of perfect squares with signs
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 alge567 Using numerical methods to approximate a square root to the nearest tenth
 alge568 Using numerical methods to approximate a square root to the nearest hundredth
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 arith514 Converting a repeating decimal to a fraction
 arith432 Identifying true statements about rational and irrational numbers
 alge002 Identifying numbers as rational or irrational
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases

alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets

geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides

geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom869 Estimates and exact answers
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom143 Finding the perimeter or area of a rectangle given one of these values
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom344 Area involving rectangles and triangles
alge724 Finding an area in terms of variables
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom537 Finding the perimeter or area of a rectangle in the coordinate plane
geom832 Area of quadrilaterals in the coordinate plane
geom603 Identifying side lengths that give right triangles
geom589 Demonstrating the converse of the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom347 Introduction to a circle: Diameter, radius, and chord
geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom126 Area of a sector of a circle: Exact answer in terms of pi
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone

geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom133 Ratio of volumes
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics

mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat090 Comparing sample means
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat084 Assessing the degree of overlap of two distributions
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

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Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith004 Multiplication with carry

arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line

arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
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arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
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arith440 Operations with absolute value: Problem type 1
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alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
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alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
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alge832 Evaluating an algebraic expression: Whole number operations and exponents
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alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
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geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
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geom311 Volume of a rectangular prism
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
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alge010 Additive property of equality with integers
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arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
alge660 Identifying equivalent signed fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
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arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith814 Signed fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
alge432 Introduction to adding fractions with variables and common denominators
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
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arith605 Plotting rational numbers on a number line
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
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arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
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alge790 Evaluating expressions with exponents of zero
arith704 Exponents and signed fractions
arith859 Order of operations with fractions: Problem type 1
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alge801 Additive property of equality with fractions and mixed numbers
alge836 Additive property of equality with signed fractions
alge646 Multiplicative property of equality with whole numbers: Fractional answers
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 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
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 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
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 arith831 Understanding decimal position on a number line using zoom: Hundredths
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 arith129 Introduction to ordering decimals
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 arith717 Converting a decimal to a proper fraction without simplifying: Basic
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 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 geom525 Computing distances between decimals on the number line
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith750 Signed decimal multiplication
 arith135 Word problem with multiplication of a decimal and a whole number
 arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
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 arith083 Division of a decimal by a power of ten
 arith742 Division of a decimal by a power of 0.1
 arith745 Decimal division with rounding
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 arith136 Word problem with division of a decimal and a whole number
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arith103 Average of two numbers
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
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 arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
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 arith609 Ordering fractions and decimals
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 arith741 Exponents and decimals: Products less than 0.1
 arith720 Order of operations with decimals: Problem type 1
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 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge800 Additive property of equality with decimals
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 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
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 arith827 Finding a unit price
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 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions
 arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
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mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
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 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
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 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
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 unit001 Metric distance conversion with whole number values
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 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
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 mstat062 Reading a positive temperature from a thermometer
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 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
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arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
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 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
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 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator

arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 arith915 Calculating income tax
 arith918 Comparing discounts
 arith909 Examining a savings plan for college
 arith914 Calculations involving paying for college
 arith920 Comparing total costs for attending different colleges
 arith922 Distinguishing between fixed and variable expenses
 arith916 Computing percentages for categories of a budget
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 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
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 arith917 Computing a person's net worth
 arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
 arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
 arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
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 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
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 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
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 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
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 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
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alge006 Solving a two-step equation with integers
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alge614 Clearing fractions in an equation
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alge742 Solving equations with zero, one, or infinitely many solutions
alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
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alge864 Solving an absolute value equation: Problem type 1
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
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alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge016 Translating a sentence into a one-step equation
alge671 Choosing stories that can be represented by given one-step equations
alge841 Translating a sentence into a multi-step equation
alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
alge618 Comparing arithmetic and algebraic solutions to a word problem
alge672 Choosing stories that can be represented by given two-step equations
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
alge014 Solving a word problem with two unknowns using a linear equation
alge673 Writing an equation to represent a real-world problem: Variable on both sides
alge674 Writing and solving a real-world problem given an equation with the variable on both sides
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
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alge796 Solving a distance, rate, time problem using a linear equation
alge015 Translating a sentence by using an inequality symbol
alge845 Translating a sentence into a one-step inequality
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alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
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 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
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 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
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 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
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 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
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 alge279 Plotting a point in quadrant 1
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 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
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 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
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 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
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geom358 Identifying parallel and perpendicular lines
 mstat007 Interpreting a line graph
 arith454 Making a table and plotting points given a unit rate
 arith501 Identifying proportional relationships in graphs: Basic
 arith502 Identifying proportional relationships in graphs: Advanced
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
 alge699 Comparing proportional relationships given in different forms
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
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 alge625 Identifying linear equations: Basic
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations

fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge925 Finding the first terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base
 alge961 Introduction to the product rule with negative exponents
 alge689 Introduction to the quotient rule with negative exponents: Whole number base
 alge755 Quotient rule with negative exponents: Problem type 1
 alge691 Introduction to the power of a power rule with negative exponents: Whole number base
 alge025 Power of a power rule with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot025 Estimating numbers using scientific notation
 scinot020 Choosing metric units and converting to the base unit in scientific notation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
 scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
 scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
 scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
 scinot017 Estimating the sum or difference of two numbers written in scientific notation
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge032 Squaring a binomial: Univariate
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge737 Introduction to the LCM of two monomials

alge055 Least common multiple of two monomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 arith016 Square root of a perfect square
 arith601 Square root of a rational perfect square
 alge413 Finding all square roots of a number
 arith760 Square roots of perfect squares with signs
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 alge567 Using numerical methods to approximate a square root to the nearest tenth
 alge568 Using numerical methods to approximate a square root to the nearest hundredth
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 alge001 Identifying numbers as integers or non-integers
 arith513 Identifying rational decimal numbers
 arith514 Converting a repeating decimal to a fraction
 arith432 Identifying true statements about rational and irrational numbers
 alge002 Identifying numbers as rational or irrational
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles

geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps

geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid

geom537 Finding the perimeter or area of a rectangle in the coordinate plane
geom832 Area of quadrilaterals in the coordinate plane
geom603 Identifying side lengths that give right triangles
geom589 Demonstrating the converse of the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom347 Introduction to a circle: Diameter, radius, and chord
geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom126 Area of a sector of a circle: Exact answer in terms of pi
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom841 Volume of a sphere
geom574 Word problem involving the volume of a sphere
geom133 Ratio of volumes
geom219 Nets of solids
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom555 Distinguishing between surface area and volume
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom578 Word problem involving the surface area of a cylinder
geom842 Surface area of a sphere
geom338 Surface area involving prisms or cylinders
geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
mstat080 Choosing an appropriate method for gathering data: Problem type 1
mstat081 Choosing an appropriate method for gathering data: Problem type 2
mstat056 Interpreting a tally table
mstat097 Constructing a two-way frequency table: Basic
mstat098 Constructing a two-way frequency table: Advanced
mstat049 Computing a percentage from a table of values
mstat087 Making an inference using a two-way frequency table
stat020 Calculating relative frequencies in a contingency table
mstat025 Finding if a question can be answered by the data
mstat037 Constructing a line plot
mstat005 Constructing a bar graph for non-numerical data
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat057 Interpreting a pictograph table
mstat031 Interpreting a stem-and-leaf plot
geom814 Angle measure in a circle graph
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat093 Classifying linear and nonlinear relationships from scatter plots
mstat071 Linear relationship and the correlation coefficient
mstat096 Identifying outliers and clustering in scatter plots
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat075 Understanding the mean graphically: Two bars
mstat076 Understanding the mean graphically: Four or more bars
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
mstat078 Comparing measures of center and variation
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat090 Comparing sample means
mstat082 Computing mean absolute deviation from a list of numerical values
mstat083 Computing mean absolute deviation from a bar graph
mstat084 Assessing the degree of overlap of two distributions
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
mstat099 Determining a sample space and outcomes for a simple event

mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

B.17 Algebra Readiness

Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith004 Multiplication with carry
 arith615 Introduction to multiplication of large numbers
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith014 Multiplication of large numbers
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith614 Word problem with multiplication or division of whole numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
 arith243 Division of whole numbers given in fractional form
 arith711 Division involving zero
 arith005 Division with carry
 arith901 Whole number division: 2-digit by 2-digit, no remainder
 arith902 Whole number division: 3-digit by 2-digit, no remainder
 arith616 Quotient and remainder: Problem type 1
 arith617 Quotient and remainder: Problem type 2
 arith631 Quotient and remainder: Problem type 3
 arith650 Division involving quotients with intermediate zeros
 arith023 Word problem with division of whole numbers and rounding
 arith651 Introduction to inequalities

arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers

arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom311 Volume of a rectangular prism
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge010 Additive property of equality with integers
alge008 Multiplicative property of equality with whole numbers
alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
alge660 Identifying equivalent signed fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith814 Signed fraction division
arith819 Word problem involving fractions and division

arith618 Addition or subtraction of fractions with the same denominator
 arith802 Addition or subtraction of fractions with the same denominator and simplification
 alge432 Introduction to adding fractions with variables and common denominators
 arith801 Finding the LCD of two fractions
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith605 Plotting rational numbers on a number line
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 alge790 Evaluating expressions with exponents of zero
 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

Decimals

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals

arith717 Converting a decimal to a proper fraction without simplifying: Basic
arith719 Converting a decimal to a proper fraction without simplifying: Advanced
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
geom525 Computing distances between decimals on the number line
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith750 Signed decimal multiplication
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith751 Signed decimal division
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith733 Using a calculator to convert a fraction to a rounded decimal
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith732 Converting a fraction or mixed number to a rounded decimal
arith609 Ordering fractions and decimals
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3

arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions
 arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values

unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 arith915 Calculating income tax

arith918 Comparing discounts
 arith909 Examining a savings plan for college
 arith914 Calculations involving paying for college
 arith920 Comparing total costs for attending different colleges
 arith922 Distinguishing between fixed and variable expenses
 arith916 Computing percentages for categories of a budget
 arith919 Computations involving cost of living and hourly wage
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score
 arith917 Computing a person's net worth
 arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
 arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
 arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
 arith910 Calculating and comparing simple interest and compound interest

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 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions

alge614 Clearing fractions in an equation
alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
alge208 Solving a two-step equation with signed fractions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge742 Solving equations with zero, one, or infinitely many solutions
alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge603 Introduction to solving an absolute value equation
alge864 Solving an absolute value equation: Problem type 1
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge016 Translating a sentence into a one-step equation
alge671 Choosing stories that can be represented by given one-step equations
alge841 Translating a sentence into a multi-step equation
alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
alge618 Comparing arithmetic and algebraic solutions to a word problem
alge672 Choosing stories that can be represented by given two-step equations
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
alge014 Solving a word problem with two unknowns using a linear equation
alge673 Writing an equation to represent a real-world problem: Variable on both sides
alge674 Writing and solving a real-world problem given an equation with the variable on both sides
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
alge796 Solving a distance, rate, time problem using a linear equation
alge015 Translating a sentence by using an inequality symbol
alge845 Translating a sentence into a one-step inequality
alge653 Introduction to identifying solutions to an inequality
alge748 Writing an inequality for a real-world situation
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge847 Writing a compound inequality given a graph on the number line
alge652 Identifying solutions to a one-step linear inequality
alge848 Additive property of inequality with whole numbers
alge849 Additive property of inequality with integers
alge852 Additive property of inequality with signed fractions
alge853 Additive property of inequality with signed decimals
alge809 Multiplicative property of inequality with whole numbers
alge854 Multiplicative property of inequality with integers
alge964 Multiplicative property of inequality with signed fractions
alge621 Solving a word problem using a one-step linear inequality
alge844 Identifying solutions to a two-step linear inequality in one variable
alge636 Solving a two-step linear inequality with whole numbers
alge855 Solving a two-step linear inequality: Problem type 1
alge856 Solving a two-step linear inequality: Problem type 2
alge857 Solving a two-step linear inequality with a fractional coefficient

alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality

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alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge874 Identifying linear functions given ordered pairs
 geom358 Identifying parallel and perpendicular lines
 mstat007 Interpreting a line graph
 arith454 Making a table and plotting points given a unit rate
 arith501 Identifying proportional relationships in graphs: Basic
 arith502 Identifying proportional relationships in graphs: Advanced
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
 alge699 Comparing proportional relationships given in different forms
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y -intercept
 alge196 Graphing a line through a given point with a given slope
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation

alge828 Interpreting direct variation from a graph
alge905 Writing an inverse variation equation
alge903 Identifying direct and inverse variation equations
alge902 Identifying direct and inverse variation from ordered pairs and writing equations
alge176 Word problem on inverse variation
alge220 Word problem on inverse proportions
alge625 Identifying linear equations: Basic
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y-intercept
alge258 Writing an equation of a line given its slope and y-intercept
alge892 Writing an equation and graphing a line given its slope and y-intercept
alge893 Writing an equation in slope-intercept form given the slope and a point
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge070 Writing an equation of a line given the y-intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
alge655 Writing and evaluating a function that models a real-world situation: Basic
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge654 Graphing ordered pairs and writing an equation from a table of values in context
alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge987 Comparing properties of linear functions given in different forms
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge670 Identifying independent and dependent quantities from tables and graphs
mstat052 Identifying independent and dependent variables from equations or real-world situations
fun032 Identifying functions from relations
fun010 Vertical line test
fun016 Domain and range from ordered pairs
fun001 Table for a linear function
pcalc760 Evaluating functions: Linear and quadratic or cubic
alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
alge990 Domain and range of a linear function that models a real-world situation
fun026 Finding an output of a function from its graph
pcalc761 Finding inputs and outputs of a function from its graph
fun007 Domain and range from the graph of a discrete relation
alge896 Graphing an integer function and finding its range for a given domain
alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
alge999 Finding where a function is increasing, decreasing, or constant given the graph
mstat018 Choosing a graph to fit a narrative: Basic
mstat051 Choosing a graph to fit a narrative: Advanced
alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
alge900 Graphing an absolute value equation in the plane: Basic

alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents

arith684 Power of 10: Negative exponent
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
arith024 Ordering numbers with negative exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge687 Introduction to the product rule with negative exponents: Whole number base
alge961 Introduction to the product rule with negative exponents
alge689 Introduction to the quotient rule with negative exponents: Whole number base
alge755 Quotient rule with negative exponents: Problem type 1
alge691 Introduction to the power of a power rule with negative exponents: Whole number base
alge025 Power of a power rule with negative exponents
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot025 Estimating numbers using scientific notation
scinot020 Choosing metric units and converting to the base unit in scientific notation
scinot021 Expressing calculator notation as scientific notation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
scinot017 Estimating the sum or difference of two numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge032 Squaring a binomial: Univariate
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge045 Finding the roots of a quadratic equation with leading coefficient 1
arith016 Square root of a perfect square
arith601 Square root of a rational perfect square
alge413 Finding all square roots of a number
arith760 Square roots of perfect squares with signs
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge567 Using numerical methods to approximate a square root to the nearest tenth
alge568 Using numerical methods to approximate a square root to the nearest hundredth
arith515 Approximating the location of irrational numbers on a number line
arith712 Ordering real numbers

alge001 Identifying numbers as integers or non-integers
 arith513 Identifying rational decimal numbers
 arith514 Converting a repeating decimal to a fraction
 arith432 Identifying true statements about rational and irrational numbers
 alge002 Identifying numbers as rational or irrational
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines

geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates

geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom832 Area of quadrilaterals in the coordinate plane
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom126 Area of a sector of a circle: Exact answer in terms of pi

geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of π
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom841 Volume of a sphere
geom574 Word problem involving the volume of a sphere
geom133 Ratio of volumes
geom219 Nets of solids
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom555 Distinguishing between surface area and volume
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of π
geom578 Word problem involving the surface area of a cylinder
geom842 Surface area of a sphere
geom338 Surface area involving prisms or cylinders
geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
mstat080 Choosing an appropriate method for gathering data: Problem type 1
mstat081 Choosing an appropriate method for gathering data: Problem type 2
mstat056 Interpreting a tally table
mstat097 Constructing a two-way frequency table: Basic
mstat098 Constructing a two-way frequency table: Advanced
mstat049 Computing a percentage from a table of values
mstat087 Making an inference using a two-way frequency table
stat020 Calculating relative frequencies in a contingency table
mstat025 Finding if a question can be answered by the data
mstat037 Constructing a line plot
mstat005 Constructing a bar graph for non-numerical data
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph

mstat044 Interpreting a double bar graph
mstat057 Interpreting a pictograph table
mstat031 Interpreting a stem-and-leaf plot
geom814 Angle measure in a circle graph
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat093 Classifying linear and nonlinear relationships from scatter plots
mstat071 Linear relationship and the correlation coefficient
mstat096 Identifying outliers and clustering in scatter plots
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat075 Understanding the mean graphically: Two bars
mstat076 Understanding the mean graphically: Four or more bars
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
mstat078 Comparing measures of center and variation
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat090 Comparing sample means
mstat082 Computing mean absolute deviation from a list of numerical values
mstat083 Computing mean absolute deviation from a bar graph
mstat084 Assessing the degree of overlap of two distributions
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
mstat054 Classifying likelihood
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
mstat039 Understanding likelihood
mstat048 Odds of an event
stat106 Outcomes and event probability
stat112 Probabilities involving two dice
mstat011 Area as probability
mstat046 Experimental and theoretical probability
mstat047 Introduction to expectation
mstat012 Probability of independent events
mstat013 Probability of dependent events
mstat085 Identifying outcomes in a random number table used to simulate a compound event
mstat086 Using a random number table to simulate a compound event

B.18 Pre-Algebra

Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced

arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle

geom866 Perimeter and area on a grid
 geom311 Volume of a rectangular prism
 alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge010 Additive property of equality with integers
 alge008 Multiplicative property of equality with whole numbers
 alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 alge660 Identifying equivalent signed fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
 arith509 Modeling multiplication of proper fractions
 arith813 Multiplication of 3 fractions
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith818 Word problem involving fractions and multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith507 Fact families for multiplication and division of fractions
 arith508 Modeling division of a whole number by a fraction
 arith814 Signed fraction division
 arith819 Word problem involving fractions and division
 arith618 Addition or subtraction of fractions with the same denominator
 arith802 Addition or subtraction of fractions with the same denominator and simplification
 alge432 Introduction to adding fractions with variables and common denominators
 arith801 Finding the LCD of two fractions
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith605 Plotting rational numbers on a number line
 arith215 Addition or subtraction of mixed numbers with the same denominator

arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 alge790 Evaluating expressions with exponents of zero
 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

Decimals

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 geom525 Computing distances between decimals on the number line
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers

arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith750 Signed decimal multiplication
 arith135 Word problem with multiplication of a decimal and a whole number
 arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
 arith019 Division of a decimal by a 2-digit decimal
 arith083 Division of a decimal by a power of ten
 arith742 Division of a decimal by a power of 0.1
 arith745 Decimal division with rounding
 arith751 Signed decimal division
 arith136 Word problem with division of a decimal and a whole number
 arith138 Word problem with division of two decimals
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith103 Average of two numbers
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 arith753 Squaring decimal bases: Products greater than 0.1
 arith741 Exponents and decimals: Products less than 0.1
 arith720 Order of operations with decimals: Problem type 1
 arith746 Order of operations with decimals: Problem type 2
 arith747 Order of operations with decimals: Problem type 3
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals

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arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy

arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions
 arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100

arith674 Finding the percentage of a grid that is shaded
arith903 Representing benchmark percentages on a grid
arith723 Introduction to converting a percentage to a decimal
arith833 Introduction to converting a decimal to a percentage
arith834 Converting between percentages and decimals
arith841 Converting a mixed number percentage to a decimal
arith835 Converting between percentages and decimals in a real-world situation
arith090 Converting a percentage to a fraction in simplest form
arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith904 Finding benchmark fractions and percentages for a figure
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage
arith842 Converting a fraction to a percentage in a real-world situation
arith840 Finding a percentage of a whole number
arith030 Finding a percentage of a whole number without a calculator: Basic
arith844 Finding a percentage of a whole number without a calculator: Advanced
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith845 Finding a percentage of a total amount: Real-world situations
arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
arith857 Estimating a tip without a calculator
arith069 Writing a ratio as a percentage without a calculator
arith850 Finding the rate of a tax or commission
arith849 Finding the total amount given the percentage of a partial amount
stat805 Making a reasonable inference based on proportion statistics
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith232 Finding simple interest without a calculator
arith853 Introduction to compound interest
arith915 Calculating income tax
arith918 Comparing discounts
arith909 Examining a savings plan for college
arith914 Calculations involving paying for college
arith920 Comparing total costs for attending different colleges
arith922 Distinguishing between fixed and variable expenses
arith916 Computing percentages for categories of a budget
arith919 Computations involving cost of living and hourly wage
arith921 Comparing annual salaries of different occupations
arith911 Calculations involving purchases with debit and credit cards
arith950 Comparing costs of checking accounts
arith951 Balancing a check register
arith912 Reading a credit report
arith913 Understanding the impact of a credit score
arith917 Computing a person's net worth
arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
arith910 Calculating and comparing simple interest and compound interest

Equations and Inequalities

alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge658 Introduction to solving a rational equation
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions

alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge016 Translating a sentence into a one-step equation
 alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 alge796 Solving a distance, rate, time problem using a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality

Graphing, Functions, and Sequences

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates

arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x- and y-intercepts
 alge881 Graphing a line by first finding its x- and y-intercepts
 alge874 Identifying linear functions given ordered pairs
 geom358 Identifying parallel and perpendicular lines
 mstat007 Interpreting a line graph
 arith454 Making a table and plotting points given a unit rate
 arith501 Identifying proportional relationships in graphs: Basic
 arith502 Identifying proportional relationships in graphs: Advanced
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
 alge699 Comparing proportional relationships given in different forms
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 alge625 Identifying linear equations: Basic
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form

geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule

alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base
 alge961 Introduction to the product rule with negative exponents
 alge689 Introduction to the quotient rule with negative exponents: Whole number base
 alge755 Quotient rule with negative exponents: Problem type 1
 alge691 Introduction to the power of a power rule with negative exponents: Whole number base
 alge025 Power of a power rule with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot025 Estimating numbers using scientific notation
 scinot020 Choosing metric units and converting to the base unit in scientific notation
 scinot021 Expressing calculator notation as scientific notation

scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
scinot017 Estimating the sum or difference of two numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge032 Squaring a binomial: Univariate
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge045 Finding the roots of a quadratic equation with leading coefficient 1
arith016 Square root of a perfect square
arith601 Square root of a rational perfect square
alge413 Finding all square roots of a number
arith760 Square roots of perfect squares with signs
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge567 Using numerical methods to approximate a square root to the nearest tenth
alge568 Using numerical methods to approximate a square root to the nearest hundredth
arith515 Approximating the location of irrational numbers on a number line
arith712 Ordering real numbers
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith514 Converting a repeating decimal to a fraction
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
alge080 Simplifying a radical expression with an even exponent
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
alge962 Solving an equation of the form $x^2 = a$ using the square root property
geom564 Finding side lengths of squares given an area and a perimeter
alge400 Introduction to solving a radical equation
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge542 Word problem involving radical equations: Basic
arith094 Cube root of an integer

alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle

pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure

alge615 Writing algebraic expressions for the perimeter of a figure
geom817 Finding a side length given the perimeter and side lengths with variables
geom217 Finding the side length of a rectangle given its perimeter or area
geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom869 Estimates and exact answers
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom143 Finding the perimeter or area of a rectangle given one of these values
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom344 Area involving rectangles and triangles
alge724 Finding an area in terms of variables
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom537 Finding the perimeter or area of a rectangle in the coordinate plane
geom832 Area of quadrilaterals in the coordinate plane
geom603 Identifying side lengths that give right triangles
geom589 Demonstrating the converse of the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom347 Introduction to a circle: Diameter, radius, and chord
geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom126 Area of a sector of a circle: Exact answer in terms of pi
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder

geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom133 Ratio of volumes
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution

mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat090 Comparing sample means
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat084 Assessing the degree of overlap of two distributions
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

B.19 M.S. Geometry

Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith004 Multiplication with carry

arith615 Introduction to multiplication of large numbers
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
alge732 Finding patterns in shapes
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith409 Introduction to the distributive property
arith056 Factors
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
alge286 Plotting integers on a number line
arith691 Ordering integers
arith402 Plotting opposite integers on a number line
arith071 Absolute value of a number
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith440 Operations with absolute value: Problem type 1
alge694 Computing the distance between two integers on a number line
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith702 Exponents and integers: Problem type 1
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge008 Multiplicative property of equality with whole numbers
geom339 Perimeter of a polygon

geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid

Fractions and Decimals

arith623 Introduction to fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith813 Multiplication of 3 fractions
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith821 Exponents and fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith802 Addition or subtraction of fractions with the same denominator and simplification
 arith801 Finding the LCD of two fractions
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 arith110 Decimal place value: Tenths and hundredths
 arith129 Introduction to ordering decimals
 arith221 Rounding decimals
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 geom525 Computing distances between decimals on the number line
 arith132 Word problem with addition or subtraction of 2 decimals

arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith082 Multiplication of a decimal by a power of ten
 arith135 Word problem with multiplication of a decimal and a whole number
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
 arith083 Division of a decimal by a power of ten
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith733 Using a calculator to convert a fraction to a rounded decimal
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith862 Applying the percent equation: Problem type 1
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced

Equations

alge010 Additive property of equality with integers
 alge797 Multiplicative property of equality with integers
 alge801 Additive property of equality with fractions and mixed numbers
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients

alge608 Using distribution and combining like terms to simplify: Univariate
 alge024 Introduction to the product rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge016 Translating a sentence into a one-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge815 Introduction to using substitution to solve a linear equation
 alge658 Introduction to solving a rational equation
 alge060 Solving a rational equation that simplifies to linear: Denominator x

Graphing

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge259 Graphing a line given its slope and y -intercept

alge196 Graphing a line through a given point with a given slope

Angles and Lines

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom359 Identifying congruent shapes on a grid
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines

Triangles and Polygons

geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 arith016 Square root of a perfect square
 arith763 Using a calculator to approximate a square root
 arith093 Simplifying the square root of a whole number less than 100
 arith767 Introduction to square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem

geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Similarity

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith064 Solving a word problem on proportions using a unit rate
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 alge888 Finding the coordinate that yields a given slope
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 alge814 Using right triangles to find the slope of a line
 geom860 Special right triangles: Decimal answers
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points

arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters and Areas

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom564 Finding side lengths of squares given an area and a perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom832 Area of quadrilaterals in the coordinate plane
 geom603 Identifying side lengths that give right triangles

geom589 Demonstrating the converse of the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom126 Area of a sector of a circle: Exact answer in terms of pi
 geom814 Angle measure in a circle graph

Volumes and Surface Areas

geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom518 Volume of a solid made of cubes with unit fraction edge lengths
 geom535 Volume of a rectangular prism with fractional edge lengths
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom565 Finding the side length of a cube given its volume
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom035 Volume of a cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom133 Ratio of volumes
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom338 Surface area involving prisms or cylinders
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone

geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom842 Surface area of a sphere
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Probability

mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

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Whole Numbers

arith633 One-digit addition with carry
 arith001 Addition without carry
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith636 Subtracting a 1-digit number from a 2-digit number
 arith007 Subtraction without borrowing
 arith128 Adding or subtracting 10, 100, or 1000
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers

mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith639 Using multiplication to find the number of squares
arith679 Multiplication by 10, 100, and 1000
arith003 Multiplication without carry
arith004 Multiplication with carry
arith675 Understanding multiplication of a one-digit number with a larger number
arith632 Multiplication with trailing zeros: Problem type 1
arith615 Introduction to multiplication of large numbers
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith052 Division without carry
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith650 Division involving quotients with intermediate zeros
arith614 Word problem with multiplication or division of whole numbers
arith644 Word problem on quotient and remainder
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith651 Introduction to inequalities
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith034 Prime numbers
arith035 Prime factorization

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions

arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith119 Introduction to fraction multiplication
arith086 Product of a fraction and a whole number: Problem type 1
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith821 Exponents and fractions
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith819 Word problem involving fractions and division
arith801 Finding the LCD of two fractions
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith815 Mixed number multiplication
arith068 Mixed number division

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith221 Rounding decimals
arith717 Converting a decimal to a proper fraction without simplifying: Basic
arith719 Converting a decimal to a proper fraction without simplifying: Advanced
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers

arith131 Estimating a decimal sum or difference
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith082 Multiplication of a decimal by a power of ten
 arith017 Multiplication of a decimal by a whole number
 arith738 Multiplication of a decimal by a power of 0.1
 arith055 Decimal multiplication: Problem type 1
 arith135 Word problem with multiplication of a decimal and a whole number
 arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith083 Division of a decimal by a power of ten
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
 arith019 Division of a decimal by a 2-digit decimal
 arith136 Word problem with division of a decimal and a whole number
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith609 Ordering fractions and decimals
 arith836 Converting a fraction with a denominator of 100 to a percentage
 arith674 Finding the percentage of a grid that is shaded
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation

Signed Numbers

alge286 Plotting integers on a number line
 mstat038 Reading the temperature from a thermometer
 arith691 Ordering integers
 arith415 Using a number line to compare integers
 arith699 Writing a signed number for a real-world situation
 arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
 arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
 arith416 Comparing signed numbers relating to a real-world situation
 arith402 Plotting opposite integers on a number line
 arith403 Finding opposites of integers
 arith071 Absolute value of a number
 arith412 Finding all numbers with a given absolute value
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith430 Identifying relative change when combining two quantities
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3

arith754 Addition and subtraction with 3 integers
 arith440 Operations with absolute value: Problem type 1
 alge694 Computing the distance between two integers on a number line
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith952 Word problem with multiplication or division of integers
 arith118 Order of operations with integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 alge660 Identifying equivalent signed fractions
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith750 Signed decimal multiplication
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith704 Exponents and signed fractions
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge649 Evaluating a formula
 alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith655 Introduction to properties of addition
 arith656 Introduction to properties of multiplication
 arith409 Introduction to the distributive property
 arith657 Understanding the distributive property
 alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge613 Identifying equivalent algebraic expressions
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge293 Combining like terms in a quadratic expression

Equations and Inequalities

alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers

alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge920 Introduction to solving an equation with parentheses
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith686 Writing a ratio as a percentage
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge623 Solving a word problem using a two-step linear inequality

Graphing

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge695 Finding distances between points that share a common coordinate given the graph
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun001 Table for a linear function
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 mstat007 Interpreting a line graph
 alge263 Interpreting the graphs of two functions
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge828 Interpreting direct variation from a graph

Exponents and Polynomials

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith683 Power of 10: Positive exponent
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 arith684 Power of 10: Negative exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge764 Multiplying conjugate binomials: Univariate
 alge032 Squaring a binomial: Univariate
 arith016 Square root of a perfect square

arith763 Using a calculator to approximate a square root
 arith712 Ordering real numbers
 alge001 Identifying numbers as integers or non-integers
 arith513 Identifying rational decimal numbers
 arith432 Identifying true statements about rational and irrational numbers
 alge002 Identifying numbers as rational or irrational

Geometry

geom525 Computing distances between decimals on the number line
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom866 Perimeter and area on a grid
 geom019 Area of a square or a rectangle
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom410 Word problem involving the area of a square or a rectangle
 geom340 Area of a piecewise rectangular figure
 geom801 Area of a triangle
 geom001 Finding an angle measure of a triangle given two angles
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom016 Circumference of a circle
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom035 Volume of a cylinder
 geom219 Nets of solids
 geom632 Surface area of a rectangular prism made of unit cubes
 geom031 Surface area of a cube or a rectangular prism
 geom555 Distinguishing between surface area and volume
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit012 Time unit conversion with whole number values
 alge218 Solving a word problem involving rates and time conversion
 mstat097 Constructing a two-way frequency table: Basic
 mstat049 Computing a percentage from a table of values
 mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 stat804 Interpreting a circle graph or pie chart
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 arith103 Average of two numbers
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event

B.21 Foundations of H.S. Math

Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors

arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom311 Volume of a rectangular prism
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2

alge009 Additive property of equality with whole numbers
alge010 Additive property of equality with integers
alge008 Multiplicative property of equality with whole numbers
alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
alge660 Identifying equivalent signed fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith814 Signed fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
alge432 Introduction to adding fractions with variables and common denominators
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith605 Plotting rational numbers on a number line
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry

arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 alge790 Evaluating expressions with exponents of zero
 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

Decimals

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 geom525 Computing distances between decimals on the number line
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1

arith046 Decimal multiplication: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith750 Signed decimal multiplication
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith751 Signed decimal division
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith733 Using a calculator to convert a fraction to a rounded decimal
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith732 Converting a fraction or mixed number to a rounded decimal
arith609 Ordering fractions and decimals
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith748 Addition or subtraction with a decimal and a mixed number
arith749 Multiplication with a decimal and a fraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge800 Additive property of equality with decimals
alge825 Multiplicative property of equality with decimals

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
arith663 Writing ratios for real-world situations
arith450 Identifying statements that describe a ratio
arith824 Simplifying a ratio of whole numbers: Problem type 1
arith825 Simplifying a ratio of decimals
arith827 Finding a unit price
arith455 Using tables to compare ratios
arith828 Computing unit prices to find the better buy
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
arith505 Word problem on unit rates associated with ratios of fractions
arith506 Word problem on unit rates associated with ratios of mixed numbers
arith064 Solving a word problem on proportions using a unit rate

alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal

arith833 Introduction to converting a decimal to a percentage
arith834 Converting between percentages and decimals
arith841 Converting a mixed number percentage to a decimal
arith835 Converting between percentages and decimals in a real-world situation
arith090 Converting a percentage to a fraction in simplest form
arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith904 Finding benchmark fractions and percentages for a figure
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage
arith842 Converting a fraction to a percentage in a real-world situation
arith840 Finding a percentage of a whole number
arith030 Finding a percentage of a whole number without a calculator: Basic
arith844 Finding a percentage of a whole number without a calculator: Advanced
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith845 Finding a percentage of a total amount: Real-world situations
arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
arith857 Estimating a tip without a calculator
arith069 Writing a ratio as a percentage without a calculator
arith850 Finding the rate of a tax or commission
arith849 Finding the total amount given the percentage of a partial amount
stat805 Making a reasonable inference based on proportion statistics
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith232 Finding simple interest without a calculator
arith853 Introduction to compound interest
arith915 Calculating income tax
arith918 Comparing discounts
arith909 Examining a savings plan for college
arith914 Calculations involving paying for college
arith920 Comparing total costs for attending different colleges
arith922 Distinguishing between fixed and variable expenses
arith916 Computing percentages for categories of a budget
arith919 Computations involving cost of living and hourly wage
arith921 Comparing annual salaries of different occupations
arith911 Calculations involving purchases with debit and credit cards
arith950 Comparing costs of checking accounts
arith951 Balancing a check register
arith912 Reading a credit report
arith913 Understanding the impact of a credit score
arith917 Computing a person's net worth
arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
arith910 Calculating and comparing simple interest and compound interest

Equations and Inequalities

alge647 Identifying like terms

alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge658 Introduction to solving a rational equation
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge016 Translating a sentence into a one-step equation
 alge671 Choosing stories that can be represented by given one-step equations

alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 alge796 Solving a distance, rate, time problem using a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality

Graphing, Functions, and Sequences

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates

alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x- and y-intercepts
 alge881 Graphing a line by first finding its x- and y-intercepts
 alge874 Identifying linear functions given ordered pairs
 geom358 Identifying parallel and perpendicular lines
 mstat007 Interpreting a line graph
 arith454 Making a table and plotting points given a unit rate
 arith501 Identifying proportional relationships in graphs: Basic
 arith502 Identifying proportional relationships in graphs: Advanced
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
 alge699 Comparing proportional relationships given in different forms
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 alge625 Identifying linear equations: Basic
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point

alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
alge655 Writing and evaluating a function that models a real-world situation: Basic
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge654 Graphing ordered pairs and writing an equation from a table of values in context
alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge987 Comparing properties of linear functions given in different forms
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge670 Identifying independent and dependent quantities from tables and graphs
mstat052 Identifying independent and dependent variables from equations or real-world situations
fun032 Identifying functions from relations
fun010 Vertical line test
fun016 Domain and range from ordered pairs
fun001 Table for a linear function
pcalc760 Evaluating functions: Linear and quadratic or cubic
alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
alge990 Domain and range of a linear function that models a real-world situation
fun026 Finding an output of a function from its graph
pcalc761 Finding inputs and outputs of a function from its graph
fun007 Domain and range from the graph of a discrete relation
alge896 Graphing an integer function and finding its range for a given domain
alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
alge999 Finding where a function is increasing, decreasing, or constant given the graph
mstat018 Choosing a graph to fit a narrative: Basic
mstat051 Choosing a graph to fit a narrative: Advanced
alge913 Graphing an absolute value equation of the form $y = A - x -$
alge900 Graphing an absolute value equation in the plane: Basic
alge168 Graphing an absolute value equation in the plane: Advanced
alge954 Graphing a parabola of the form $y = ax^2$
alge955 Graphing a parabola of the form $y = ax^2 + c$
alge262 Graphing a cubic function of the form $y = ax^3$
alge925 Finding the next terms of an arithmetic sequence with whole numbers
alge933 Finding the next terms of a geometric sequence with whole numbers
alge732 Finding patterns in shapes
alge644 Finding the first terms of an arithmetic sequence using an explicit rule
alge645 Finding the first terms of a geometric sequence using an explicit rule
alge906 Finding the next terms of an arithmetic sequence with integers
alge979 Identifying arithmetic sequences and finding the common difference
alge931 Finding a specified term of an arithmetic sequence given the first terms
pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
alge909 Writing an explicit rule for an arithmetic sequence
alge907 Finding the next terms of a geometric sequence with signed numbers
alge981 Identifying arithmetic and geometric sequences
alge980 Identifying geometric sequences and finding the common ratio
alge934 Finding a specified term of a geometric sequence given the first terms
pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
alge914 Identifying solutions to a system of linear equations
alge725 Graphically solving a system of linear equations
alge815 Introduction to using substitution to solve a linear equation

alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base
 alge961 Introduction to the product rule with negative exponents
 alge689 Introduction to the quotient rule with negative exponents: Whole number base
 alge755 Quotient rule with negative exponents: Problem type 1
 alge691 Introduction to the power of a power rule with negative exponents: Whole number base
 alge025 Power of a power rule with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot025 Estimating numbers using scientific notation
 scinot020 Choosing metric units and converting to the base unit in scientific notation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation

scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
scinot017 Estimating the sum or difference of two numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge032 Squaring a binomial: Univariate
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge045 Finding the roots of a quadratic equation with leading coefficient 1
arith016 Square root of a perfect square
arith601 Square root of a rational perfect square
alge413 Finding all square roots of a number
arith760 Square roots of perfect squares with signs
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge567 Using numerical methods to approximate a square root to the nearest tenth
alge568 Using numerical methods to approximate a square root to the nearest hundredth
arith515 Approximating the location of irrational numbers on a number line
arith712 Ordering real numbers
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith514 Converting a repeating decimal to a fraction
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
alge080 Simplifying a radical expression with an even exponent
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
alge962 Solving an equation of the form $x^2 = a$ using the square root property
geom564 Finding side lengths of squares given an area and a perimeter
alge400 Introduction to solving a radical equation
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge542 Word problem involving radical equations: Basic
arith094 Cube root of an integer
alge698 Solving an equation of the form $x^3 = a$ using integers
alge093 Solving an equation using the odd-root property: Problem type 1
geom565 Finding the side length of a cube given its volume

alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons

mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area

geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom869 Estimates and exact answers
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom143 Finding the perimeter or area of a rectangle given one of these values
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom344 Area involving rectangles and triangles
alge724 Finding an area in terms of variables
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom537 Finding the perimeter or area of a rectangle in the coordinate plane
geom832 Area of quadrilaterals in the coordinate plane
geom603 Identifying side lengths that give right triangles
geom589 Demonstrating the converse of the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom347 Introduction to a circle: Diameter, radius, and chord
geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom126 Area of a sector of a circle: Exact answer in terms of pi
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom639 Relating the volumes of a cylinder and a cone

geom575 Word problem involving the volume of a cone
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom133 Ratio of volumes
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean

stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat090 Comparing sample means
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat084 Assessing the degree of overlap of two distributions
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

B.22 Essentials for Algebra

Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith001 Addition without carry
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith636 Subtracting a 1-digit number from a 2-digit number

arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith653 Fact families for addition and subtraction
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith639 Using multiplication to find the number of squares
arith679 Multiplication by 10, 100, and 1000
arith003 Multiplication without carry
arith004 Multiplication with carry
arith632 Multiplication with trailing zeros: Problem type 1
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith654 Fact families for multiplication and division
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith052 Division without carry
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
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arith647 Divisibility rules for 2, 5, and 10
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arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
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arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
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arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
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arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
geom395 Midpoint of a number line segment: Integers
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
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arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
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alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
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alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
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alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge813 Introduction to solving an equation with multiplication or division
alge010 Additive property of equality with integers

alge008 Multiplicative property of equality with whole numbers
 alge797 Multiplicative property of equality with integers
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
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 geom866 Perimeter and area on a grid
 geom311 Volume of a rectangular prism
 geom151 Measuring an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom551 Finding the complement or supplement of an angle given a figure
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 arith666 Introduction to simplifying a fraction
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 alge660 Identifying equivalent signed fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith044 Ordering fractions with the same denominator
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 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
 arith509 Modeling multiplication of proper fractions
 arith813 Multiplication of 3 fractions
 arith822 Signed fraction multiplication: Basic
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 arith818 Word problem involving fractions and multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith507 Fact families for multiplication and division of fractions
 arith508 Modeling division of a whole number by a fraction
 arith814 Signed fraction division
 arith819 Word problem involving fractions and division
 arith618 Addition or subtraction of fractions with the same denominator
 arith802 Addition or subtraction of fractions with the same denominator and simplification
 alge432 Introduction to adding fractions with variables and common denominators
 arith801 Finding the LCD of two fractions
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith805 Word problem involving addition or subtraction of fractions with different denominators

arith100 Fractional part of a circle
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith605 Plotting rational numbers on a number line
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
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 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
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 arith821 Exponents and fractions
 alge790 Evaluating expressions with exponents of zero
 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
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 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
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 arith110 Decimal place value: Tenths and hundredths
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 arith714 Writing a decimal number less than 1 given its name
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 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
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 arith831 Understanding decimal position on a number line using zoom: Hundredths
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 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
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 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
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 arith737 Decimal addition and subtraction with 3 or more numbers

arith131 Estimating a decimal sum or difference
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 geom394 Computing distances between decimals on a number line
 arith668 Addition with money
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 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith750 Signed decimal multiplication
 arith135 Word problem with multiplication of a decimal and a whole number
 arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
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 arith083 Division of a decimal by a power of ten
 arith742 Division of a decimal by a power of 0.1
 arith745 Decimal division with rounding
 arith751 Signed decimal division
 arith136 Word problem with division of a decimal and a whole number
 arith138 Word problem with division of two decimals
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith103 Average of two numbers
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
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 arith732 Converting a fraction or mixed number to a rounded decimal
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 arith720 Order of operations with decimals: Problem type 1
 arith746 Order of operations with decimals: Problem type 2
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 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge800 Additive property of equality with decimals
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arith823 Writing ratios using different notations

arith663 Writing ratios for real-world situations
arith450 Identifying statements that describe a ratio
arith824 Simplifying a ratio of whole numbers: Problem type 1
arith825 Simplifying a ratio of decimals
arith827 Finding a unit price
arith455 Using tables to compare ratios
arith828 Computing unit prices to find the better buy
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
arith505 Word problem on unit rates associated with ratios of fractions
arith506 Word problem on unit rates associated with ratios of mixed numbers
arith064 Solving a word problem on proportions using a unit rate
alge823 Solving a one-step word problem using the formula $d = rt$
geom386 Computations involving density, mass, and volume
alge281 Function tables with one-step rules
arith452 Finding missing values in a table of equivalent ratios
arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
arith504 Writing an equation to represent a proportional relationship
alge819 Solving a proportion of the form $x/a=b/c$: Basic
alge272 Solving a proportion of the form $x/a = b/c$
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
arith045 Word problem with powers of ten
arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
geom359 Identifying congruent shapes on a grid
geom360 Identifying similar or congruent shapes on a grid
geom519 Identifying and naming congruent parts of congruent triangles
geom520 Identifying and naming congruent triangles
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
geom583 Finding angle measures of a triangle given two angles of a similar triangle
geom585 Finding angle measures and side ratios to determine if two triangles are similar
geom538 Finding lengths using scale models
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mstat058 Choosing a measuring tool
mstat059 Choosing U.S. Customary measurement units
mstat033 Measuring length to the nearest inch
mstat034 Measuring length to the nearest quarter or half inch
unit005 U.S. Customary unit conversion with whole number values
mstat035 Conversions involving measurements in feet and inches
mstat036 Adding measurements in feet and inches
unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
unit009 U.S. Customary area unit conversion with whole number values
mstat060 Choosing metric measurement units
mstat063 Measuring length to the nearest centimeter
mstat064 Measuring length to the nearest millimeter
unit001 Metric distance conversion with whole number values
unit002 Metric mass or capacity conversion with whole number values
unit003 Metric distance conversion with decimal values
unit004 Metric conversion with decimal values: Two-step problem
unit010 Metric area unit conversion with decimal values
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mstat062 Reading a positive temperature from a thermometer

mstat038 Reading the temperature from a thermometer
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arith826 Simplifying a ratio of whole numbers: Problem type 2
alge218 Solving a word problem involving rates and time conversion
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unit035 Converting between compound units: Basic
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arith837 Converting a percentage to a fraction with a denominator of 100
arith674 Finding the percentage of a grid that is shaded
arith903 Representing benchmark percentages on a grid
arith723 Introduction to converting a percentage to a decimal
arith833 Introduction to converting a decimal to a percentage
arith834 Converting between percentages and decimals
arith841 Converting a mixed number percentage to a decimal
arith835 Converting between percentages and decimals in a real-world situation
arith090 Converting a percentage to a fraction in simplest form
arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith904 Finding benchmark fractions and percentages for a figure
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage
arith842 Converting a fraction to a percentage in a real-world situation
arith840 Finding a percentage of a whole number
arith030 Finding a percentage of a whole number without a calculator: Basic
arith844 Finding a percentage of a whole number without a calculator: Advanced
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith845 Finding a percentage of a total amount: Real-world situations
arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
arith857 Estimating a tip without a calculator
arith069 Writing a ratio as a percentage without a calculator
arith850 Finding the rate of a tax or commission
arith849 Finding the total amount given the percentage of a partial amount
stat805 Making a reasonable inference based on proportion statistics
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith232 Finding simple interest without a calculator
arith853 Introduction to compound interest
arith915 Calculating income tax
arith918 Comparing discounts
arith909 Examining a savings plan for college
arith914 Calculations involving paying for college
arith920 Comparing total costs for attending different colleges
arith922 Distinguishing between fixed and variable expenses
arith916 Computing percentages for categories of a budget

arith919 Computations involving cost of living and hourly wage
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score
 arith917 Computing a person's net worth
 arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
 arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
 arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
 arith910 Calculating and comparing simple interest and compound interest

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 alge665 Combining like terms: Decimal coefficients
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 alge606 Distributive property: Whole number coefficients
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 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
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 alge837 Solving a multi-step equation given in fractional form
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 alge824 Solving a two-step equation with signed decimals
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 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
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 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
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- alge271 Solving a proportion of the form $a/(x+b) = c/x$
- alge658 Introduction to solving a rational equation
- alge060 Solving a rational equation that simplifies to linear: Denominator x
- alge603 Introduction to solving an absolute value equation
- alge864 Solving an absolute value equation: Problem type 1
- alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
- alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
- alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
- alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
- alge517 Solving for a variable in terms of other variables using addition or subtraction with division
- alge518 Solving for a variable inside parentheses in terms of other variables
- alge507 Solving for a variable in terms of other variables in a linear equation with fractions
- alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
- alge016 Translating a sentence into a one-step equation
- alge671 Choosing stories that can be represented by given one-step equations
- alge841 Translating a sentence into a multi-step equation
- alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
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- alge672 Choosing stories that can be represented by given two-step equations
- alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
- alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
- alge014 Solving a word problem with two unknowns using a linear equation
- alge673 Writing an equation to represent a real-world problem: Variable on both sides
- alge674 Writing and solving a real-world problem given an equation with the variable on both sides
- alge219 Solving a decimal word problem using a linear equation with the variable on both sides
- alge704 Solving a fraction word problem using a linear equation with the variable on both sides
- alge792 Solving a word problem with three unknowns using a linear equation
- alge842 Solving a word problem involving consecutive integers
- alge794 Solving a value mixture problem using a linear equation
- alge795 Solving a percent mixture problem using a linear equation
- alge796 Solving a distance, rate, time problem using a linear equation
- alge015 Translating a sentence by using an inequality symbol
- alge845 Translating a sentence into a one-step inequality
- alge653 Introduction to identifying solutions to an inequality
- alge748 Writing an inequality for a real-world situation
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- alge822 Writing an inequality given a graph on the number line
- alge186 Translating a sentence into a compound inequality
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- alge652 Identifying solutions to a one-step linear inequality
- alge848 Additive property of inequality with whole numbers
- alge849 Additive property of inequality with integers
- alge852 Additive property of inequality with signed fractions
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- alge809 Multiplicative property of inequality with whole numbers
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- alge621 Solving a word problem using a one-step linear inequality
- alge844 Identifying solutions to a two-step linear inequality in one variable
- alge636 Solving a two-step linear inequality with whole numbers
- alge855 Solving a two-step linear inequality: Problem type 1
- alge856 Solving a two-step linear inequality: Problem type 2
- alge857 Solving a two-step linear inequality with a fractional coefficient
- alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
- alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
- alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
- alge846 Translating a sentence into a multi-step inequality
- alge619 Solving a word problem using a two-step linear inequality and describing the solution

alge623 Solving a word problem using a two-step linear inequality
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 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge283 Graphing whole number functions
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
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 alge873 Identifying solutions to a linear equation in two variables
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 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
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 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x- and y-intercepts
 alge881 Graphing a line by first finding its x- and y-intercepts
 alge874 Identifying linear functions given ordered pairs
 mstat007 Interpreting a line graph
 arith454 Making a table and plotting points given a unit rate
 arith501 Identifying proportional relationships in graphs: Basic
 arith502 Identifying proportional relationships in graphs: Advanced
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
 alge699 Comparing proportional relationships given in different forms
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge625 Identifying linear equations: Basic
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept

alge314 Finding the slope, y-intercept, and equation for a linear function given a table of values
alge893 Writing an equation in slope-intercept form given the slope and a point
alge318 Finding the slope and a point on a line given its equation in point-slope form
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge313 Writing an equation in standard form given the slope and a point
alge070 Writing an equation of a line given the y-intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge322 Comparing linear functions to the parent function $y=x$
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
alge655 Writing and evaluating a function that models a real-world situation: Basic
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge654 Graphing ordered pairs and writing an equation from a table of values in context
alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge987 Comparing properties of linear functions given in different forms
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge670 Identifying independent and dependent quantities from tables and graphs
mstat052 Identifying independent and dependent variables from equations or real-world situations
alge914 Identifying solutions to a system of linear equations
alge725 Graphically solving a system of linear equations
alge317 Writing a system of linear equations given its graph
alge815 Introduction to using substitution to solve a linear equation
alge816 Solving a system of linear equations of the form $y = mx + b$
alge751 Solving a system of linear equations using substitution
alge915 Solving a system of linear equations using elimination with addition
alge076 Solving a system of linear equations using elimination with multiplication and addition
alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
alge263 Interpreting the graphs of two functions
alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
alge184 Solving a value mixture problem using a system of linear equations
pcalc038 Addition or subtraction of matrices
alge912 Identifying solutions to a linear inequality in two variables
alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
alge720 Graphing a linear inequality in the plane: Slope-intercept form
alge018 Graphing a linear inequality in the plane: Standard form
alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
alge316 Writing an inequality given its graph in the plane: Slanted boundary line
alge079 Graphing a system of two linear inequalities: Basic
alge921 Graphing a system of two linear inequalities: Advanced
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
alge828 Interpreting direct variation from a graph
alge905 Writing an inverse variation equation
alge903 Identifying direct and inverse variation equations

alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic

alge688 Introduction to the quotient rule with positive exponents: Whole number base
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
arith029 Ordering numbers with positive exponents
arith684 Power of 10: Negative exponent
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
arith024 Ordering numbers with negative exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge687 Introduction to the product rule with negative exponents: Whole number base
alge961 Introduction to the product rule with negative exponents
alge689 Introduction to the quotient rule with negative exponents: Whole number base
alge755 Quotient rule with negative exponents: Problem type 1
alge691 Introduction to the power of a power rule with negative exponents: Whole number base
alge025 Power of a power rule with negative exponents
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot025 Estimating numbers using scientific notation
scinot020 Choosing metric units and converting to the base unit in scientific notation
scinot021 Expressing calculator notation as scientific notation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
scinot017 Estimating the sum or difference of two numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge032 Squaring a binomial: Univariate
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge045 Finding the roots of a quadratic equation with leading coefficient 1
arith016 Square root of a perfect square
arith601 Square root of a rational perfect square
alge413 Finding all square roots of a number
arith760 Square roots of perfect squares with signs
arith763 Using a calculator to approximate a square root

arith602 Estimating a square root
 alge567 Using numerical methods to approximate a square root to the nearest tenth
 alge568 Using numerical methods to approximate a square root to the nearest hundredth
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 alge001 Identifying numbers as integers or non-integers
 arith513 Identifying rational decimal numbers
 arith514 Converting a repeating decimal to a fraction
 arith432 Identifying true statements about rational and irrational numbers
 alge002 Identifying numbers as rational or irrational
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge324 Distance between two points in the plane: Decimal answers
 alge132 Distance between two points in the plane: Exact answers
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom444 Word problem on optimizing an area or perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom430 Word problem on population density
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles

geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom344 Area involving rectangles and triangles
alge724 Finding an area in terms of variables
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom437 Finding the area of a triangle or parallelogram in the coordinate plane
geom440 Finding the area of a right triangle using the Pythagorean Theorem
geom481 Side lengths, perimeters, and areas of similar polygons
geom603 Identifying side lengths that give right triangles
geom589 Demonstrating the converse of the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom347 Introduction to a circle: Diameter, radius, and chord
geom464 Identifying chords, secants, and tangents of a circle
geom465 Naming and finding measures of central angles, inscribed angles, and arcs of a circle
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom477 Circumference and area of a circle: Exact answers in terms of pi
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom126 Area of a sector of a circle: Exact answer in terms of pi
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom443 Identifying geometric shapes that model real-world objects
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom841 Volume of a sphere
geom574 Word problem involving the volume of a sphere
geom133 Ratio of volumes
geom219 Nets of solids
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes

geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom865 Measuring the net of a solid to find surface area or volume
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom484 Word problem involving the surface area of rectangular prisms and cylinders
 geom483 Word problem involving the surface area of rectangular prisms and pyramids
 geom488 Identifying similar solids
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom489 Computing side length, surface area, and volume for similar solids
 geom490 Word problem involving volumes of similar solids

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set

mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat090 Comparing sample means
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat084 Assessing the degree of overlap of two distributions
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat019 Identifying independent events given descriptions of experiments
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat115 Determining outcomes for compound events and complements of events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat114 Using a random number table to make a fair decision

Angles, Lines, and Polygons

geom152 Drawing an angle with the protractor
 geom039 Finding supplementary and complementary angles
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom389 Constructing congruent line segments
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom626 Classifying scalene, isosceles, and equilateral triangles by side lengths

geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom628 Finding angle measures of a triangle given angles with variables
 geom629 Finding angle measures of an isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 geom317 Understanding trigonometric ratios through similar right triangles
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom656 Finding the sum of the interior angle measures of a convex polygon given the number of sides
 geom655 Finding the number of sides of a convex polygon given the sum of the measures of the interior angles
 geom657 Finding a missing interior angle measure in a convex polygon
 geom658 Finding the measures of an interior angle and an exterior angle of a regular polygon

Transformations

geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom369 Writing a rule to describe a translation
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom370 Writing a rule to describe a reflection

geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom371 Writing a rule to describe a rotation
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom372 Writing a rule to describe a dilation
 geom582 Determining if figures are similar and related by a sequence of transformations

B.23 Algebra 1A

Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith697 Mixed arithmetic operations with fractions
 arith095 Multi-step word problem involving fractions and multiplication
 arith015 Writing an improper fraction as a mixed number

arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
arith016 Square root of a perfect square
arith602 Estimating a square root
arith601 Square root of a rational perfect square
arith094 Cube root of an integer
arith683 Power of 10: Positive exponent
arith684 Power of 10: Negative exponent
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom031 Surface area of a cube or a rectangular prism
geom091 Surface area of a triangular prism
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom842 Surface area of a sphere
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere
geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals

alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge831 Translating a phrase into a one-step expression
 alge733 Writing a one-step expression for a real-world situation
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons

geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y -intercept
 alge070 Writing an equation of a line given the y -intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations

geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables

alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio

alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula

alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

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Arithmetic Readiness

arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith101 Estimating a sum of whole numbers
arith233 Introduction to exponents
arith692 Writing expressions using exponents
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
alge731 Evaluating an algebraic expression: Whole numbers with two operations
alge832 Evaluating an algebraic expression: Whole number operations and exponents
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten

arith019 Division of a decimal by a 2-digit decimal
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith683 Power of 10: Positive exponent
 arith684 Power of 10: Negative exponent
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
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 geom841 Volume of a sphere
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Real Numbers

alge001 Identifying numbers as integers or non-integers
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 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced

arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators

alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge831 Translating a phrase into a one-step expression
 alge733 Writing a one-step expression for a real-world situation
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane

alge873 Identifying solutions to a linear equation in two variables
alge850 Table for a linear equation
alge066 Finding a solution to a linear equation in two variables
alge877 Graphing a linear equation of the form $y = mx$
alge878 Graphing a line given its equation in slope-intercept form: Integer slope
alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
alge880 Graphing a line given its equation in standard form
alge197 Graphing a line given its x - and y -intercepts
alge881 Graphing a line by first finding its x - and y -intercepts
alge196 Graphing a line through a given point with a given slope
alge882 Graphing a line by first finding its slope and y -intercept
alge883 Graphing a line given its equation in point-slope form
alge198 Graphing a vertical or horizontal line
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge884 Finding x - and y -intercepts given the graph of a line on a grid
alge924 Finding x - and y -intercepts of a line given the equation: Basic
alge210 Finding x - and y -intercepts of a line given the equation: Advanced
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
alge892 Writing an equation and graphing a line given its slope and y -intercept
alge070 Writing an equation of a line given the y -intercept and another point
alge893 Writing an equation in slope-intercept form given the slope and a point
alge894 Writing an equation in point-slope form given the slope and a point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
mstat052 Identifying independent and dependent variables from equations or real-world situations
alge990 Domain and range of a linear function that models a real-world situation
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge895 Identifying parallel and perpendicular lines from equations
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
alge991 Solving a linear equation by graphing
mstat051 Choosing a graph to fit a narrative: Advanced
alge828 Interpreting direct variation from a graph
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
alge925 Finding the next terms of an arithmetic sequence with whole numbers
alge906 Finding the next terms of an arithmetic sequence with integers
alge979 Identifying arithmetic sequences and finding the common difference
alge931 Finding a specified term of an arithmetic sequence given the first terms
pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
alge909 Writing an explicit rule for an arithmetic sequence
alge908 Finding the first terms of a sequence using a recursive rule
alge910 Writing a recursive rule for an arithmetic sequence
mstat023 Scatter plots and correlation
mstat030 Sketching the line of best fit
mstat068 Predictions from the line of best fit

mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents

arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables

alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph

mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.25 Traditional Algebra 1A

Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers

arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
arith016 Square root of a perfect square
arith602 Estimating a square root
arith601 Square root of a rational perfect square
arith094 Cube root of an integer
arith683 Power of 10: Positive exponent
arith684 Power of 10: Negative exponent
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles

geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition

alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge831 Translating a phrase into a one-step expression
 alge733 Writing a one-step expression for a real-world situation
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation

alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers

alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x - and y -intercepts given the graph of a line on a grid

alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge070 Writing an equation of a line given the y-intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents

alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate

alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range

stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.26 Algebra 1B

Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith088 The reciprocal of a number

arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom031 Surface area of a cube or a rectangular prism
geom091 Surface area of a triangular prism
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom842 Surface area of a sphere
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere
geom039 Finding supplementary and complementary angles

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers

alge837 Solving a multi-step equation given in fractional form
alge208 Solving a two-step equation with signed fractions
alge824 Solving a two-step equation with signed decimals
alge200 Solving an equation to find the value of an expression
alge920 Introduction to solving an equation with parentheses
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge986 Identifying properties used to solve a linear equation
alge810 Introduction to algebraic symbol manipulation
alge743 Algebraic symbol manipulation: Problem type 1
alge744 Algebraic symbol manipulation: Problem type 2
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
alge016 Translating a sentence into a one-step equation
alge841 Translating a sentence into a multi-step equation
alge730 Writing a multi-step equation for a real-world situation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge014 Solving a word problem with two unknowns using a linear equation
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge823 Solving a one-step word problem using the formula $d = rt$
alge218 Solving a word problem involving rates and time conversion
alge796 Solving a distance, rate, time problem using a linear equation
geom817 Finding a side length given the perimeter and side lengths with variables
geom217 Finding the side length of a rectangle given its perimeter or area
geom143 Finding the perimeter or area of a rectangle given one of these values
geom530 Solving equations involving vertical angles
geom001 Finding an angle measure of a triangle given two angles
geom502 Finding angle measures of a right or isosceles triangle given angles with variables
stat803 Finding the value for a new score that will yield a given mean
arith663 Writing ratios for real-world situations
alge272 Solving a proportion of the form $x/a = b/c$
alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
arith064 Solving a word problem on proportions using a unit rate
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
arith226 Converting between percentages and decimals
arith090 Converting a percentage to a fraction in simplest form
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50

arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
set002 Union and intersection of finite sets
fun001 Table for a linear function
pcalc760 Evaluating functions: Linear and quadratic or cubic
fun033 Variable expressions as inputs of functions: Problem type 1
fun016 Domain and range from ordered pairs
alge896 Graphing an integer function and finding its range for a given domain
fun032 Identifying functions from relations
fun010 Vertical line test
pcalc761 Finding inputs and outputs of a function from its graph
alge999 Finding where a function is increasing, decreasing, or constant given the graph
pcalc752 Finding local maxima and minima of a function given the graph
fun005 Writing a function rule given a table of ordered pairs: One-step rules
fun006 Writing a function rule given a table of ordered pairs: Two-step rules
alge716 Introduction to the composition of two functions
fun012 Inverse functions: Linear, discrete
alge064 Reading a point in the coordinate plane
alge067 Plotting a point in the coordinate plane
alge873 Identifying solutions to a linear equation in two variables
alge850 Table for a linear equation
alge066 Finding a solution to a linear equation in two variables
alge877 Graphing a linear equation of the form $y = mx$
alge878 Graphing a line given its equation in slope-intercept form: Integer slope
alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
alge880 Graphing a line given its equation in standard form
alge197 Graphing a line given its x - and y -intercepts
alge881 Graphing a line by first finding its x - and y -intercepts
alge196 Graphing a line through a given point with a given slope
alge882 Graphing a line by first finding its slope and y -intercept
alge883 Graphing a line given its equation in point-slope form
alge198 Graphing a vertical or horizontal line
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge884 Finding x - and y -intercepts given the graph of a line on a grid
alge924 Finding x - and y -intercepts of a line given the equation: Basic
alge210 Finding x - and y -intercepts of a line given the equation: Advanced
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
alge892 Writing an equation and graphing a line given its slope and y -intercept
alge070 Writing an equation of a line given the y -intercept and another point
alge893 Writing an equation in slope-intercept form given the slope and a point
alge894 Writing an equation in point-slope form given the slope and a point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
mstat052 Identifying independent and dependent variables from equations or real-world situations
alge990 Domain and range of a linear function that models a real-world situation
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge895 Identifying parallel and perpendicular lines from equations
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
geom808 Writing equations of lines parallel and perpendicular to a given line through a point

alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form

alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences

alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate

alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number

alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax, bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a, x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators $a, x,$ or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation

alge220 Word problem on inverse proportions
pcalc789 Finding the asymptotes of a rational function: Basic
pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat007 Interpreting a line graph
stat804 Interpreting a circle graph or pie chart
stat801 Computations from a circle graph
geom814 Angle measure in a circle graph
mstat031 Interpreting a stem-and-leaf plot
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat001 Mean of a data set
mstat028 Mean and median of a data set
mstat066 Weighted mean
mstat029 How changing a value affects the mean and median
mstat053 Choosing the best measure to describe data
stat802 Rejecting unreasonable claims based on average statistics
mstat025 Finding if a question can be answered by the data
mstat049 Computing a percentage from a table of values
stat020 Calculating relative frequencies in a contingency table
stat805 Making a reasonable inference based on proportion statistics
stat009 Percentiles
mstat072 Five-number summary and interquartile range
stat021 Population standard deviation
mstat042 Interpreting a Venn diagram of 2 sets
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
stat790 Permutations, combinations, and the multiplication principle for counting
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
mstat048 Odds of an event
stat106 Outcomes and event probability
stat112 Probabilities involving two dice
mstat011 Area as probability
mstat046 Experimental and theoretical probability
mstat047 Introduction to expectation
mstat012 Probability of independent events
mstat013 Probability of dependent events
mstat032 Probability of the union of two events

B.27 CA Algebra 1B

Arithmetic Readiness

arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith101 Estimating a sum of whole numbers
arith233 Introduction to exponents
arith692 Writing expressions using exponents
arith683 Power of 10: Positive exponent
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
alge731 Evaluating an algebraic expression: Whole numbers with two operations
alge832 Evaluating an algebraic expression: Whole number operations and exponents
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number

arith083 Division of a decimal by a power of ten
 arith019 Division of a decimal by a 2-digit decimal
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith628 Word problem with multiple decimal operations: Problem type 1
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational

arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation

alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality

alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form

alge197 Graphing a line given its x- and y-intercepts
alge881 Graphing a line by first finding its x- and y-intercepts
alge196 Graphing a line through a given point with a given slope
alge882 Graphing a line by first finding its slope and y-intercept
alge883 Graphing a line given its equation in point-slope form
alge198 Graphing a vertical or horizontal line
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge884 Finding x- and y-intercepts given the graph of a line on a grid
alge924 Finding x- and y-intercepts of a line given the equation: Basic
alge210 Finding x- and y-intercepts of a line given the equation: Advanced
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
alge892 Writing an equation and graphing a line given its slope and y-intercept
alge070 Writing an equation of a line given the y-intercept and another point
alge893 Writing an equation in slope-intercept form given the slope and a point
alge894 Writing an equation in point-slope form given the slope and a point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
mstat052 Identifying independent and dependent variables from equations or real-world situations
alge990 Domain and range of a linear function that models a real-world situation
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge895 Identifying parallel and perpendicular lines from equations
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
alge991 Solving a linear equation by graphing
mstat051 Choosing a graph to fit a narrative: Advanced
alge828 Interpreting direct variation from a graph
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
alge925 Finding the next terms of an arithmetic sequence with whole numbers
alge906 Finding the next terms of an arithmetic sequence with integers
alge979 Identifying arithmetic sequences and finding the common difference
alge931 Finding a specified term of an arithmetic sequence given the first terms
pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
alge909 Writing an explicit rule for an arithmetic sequence
alge908 Finding the first terms of a sequence using a recursive rule
alge910 Writing a recursive rule for an arithmetic sequence
mstat023 Scatter plots and correlation
mstat030 Sketching the line of best fit
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat069 Computing residuals
mstat070 Interpreting residual plots
mstat071 Linear relationship and the correlation coefficient
mstat074 Identifying correlation and causation
alge898 Translating the graph of an absolute value function: One step
alge899 Translating the graph of an absolute value function: Two steps

alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents

alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate

alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients

alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics

mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.28 Traditional Algebra 1B

Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators

arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom031 Surface area of a cube or a rectangular prism
geom091 Surface area of a triangular prism
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom842 Surface area of a sphere
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder

geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere
geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
mstat038 Reading the temperature from a thermometer
arith699 Writing a signed number for a real-world situation
alge286 Plotting integers on a number line
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith712 Ordering real numbers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith116 Signed fraction addition or subtraction: Basic
arith106 Signed fraction addition or subtraction: Advanced
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
alge984 Classifying sums and products as rational or irrational
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
arith071 Absolute value of a number
arith104 Operations with absolute value: Problem type 2
geom525 Computing distances between decimals on the number line
alge187 Properties of addition
alge188 Properties of real numbers
arith657 Understanding the distributive property
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
alge663 Combining like terms: Advanced
alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
alge801 Additive property of equality with fractions and mixed numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers
alge266 Additive property of equality with a negative coefficient
alge836 Additive property of equality with signed fractions

alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate

arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2

alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y -intercept
 alge070 Writing an equation of a line given the y -intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation

alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2×2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3×3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$

alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents

alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial

alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square

arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators

alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events

mstat013 Probability of dependent events
mstat032 Probability of the union of two events

B.29 Prep. for CA Algebra 1 Part 1

Whole Numbers

arith633 One-digit addition with carry
arith635 Adding a 2-digit number and a 1-digit number with carry
arith001 Addition without carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith128 Adding or subtracting 10, 100, or 1000
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith639 Using multiplication to find the number of squares
arith679 Multiplication by 10, 100, and 1000
arith675 Understanding multiplication of a one-digit number with a larger number
arith003 Multiplication without carry
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith632 Multiplication with trailing zeros: Problem type 1
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith075 Division facts
arith052 Division without carry
arith005 Division with carry
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith650 Division involving quotients with intermediate zeros
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith124 Whole number place value: Problem type 1
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith651 Introduction to inequalities
arith077 Ordering large numbers
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith056 Factors
arith033 Greatest common factor of 2 numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith070 Least common multiple of 2 numbers
arith034 Prime numbers

arith035 Prime factorization

Fractions and Mixed Numbers

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith801 Finding the LCD of two fractions
arith618 Addition or subtraction of fractions with the same denominator
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith119 Introduction to fraction multiplication
arith086 Product of a fraction and a whole number: Problem type 1
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division

Decimals and Percents

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith670 Converting a decimal to a fraction: Basic
arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
arith222 Converting a fraction to a terminating decimal
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1

arith628 Word problem with multiple decimal operations: Problem type 1
 arith083 Division of a decimal by a power of ten
 arith081 Division of a decimal by a whole number
 arith019 Division of a decimal by a 2-digit decimal
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith686 Writing a ratio as a percentage
 mstat049 Computing a percentage from a table of values
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator

Signed Numbers and Variable Expressions

mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith699 Writing a signed number for a real-world situation
 arith691 Ordering integers
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith118 Order of operations with integers
 arith701 Word problem with addition or subtraction of integers
 alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge293 Combining like terms in a quadratic expression
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith693 Order of operations with whole numbers and exponents: Basic
 arith683 Power of 10: Positive exponent
 arith036 Scientific notation with positive exponent
 arith684 Power of 10: Negative exponent
 arith037 Scientific notation with negative exponent
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2

arith704 Exponents and signed fractions
 alge004 Evaluating a quadratic expression: Integers
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge033 Multiplying binomials with leading coefficients of 1
 alge032 Squaring a binomial: Univariate
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 arith016 Square root of a perfect square

Equations, Inequalities, and Functions

arith655 Introduction to properties of addition
 arith656 Introduction to properties of multiplication
 arith657 Understanding the distributive property
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge810 Introduction to algebraic symbol manipulation
 alge272 Solving a proportion of the form $x/a = b/c$
 alge266 Additive property of equality with a negative coefficient
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge824 Solving a two-step equation with signed decimals
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge733 Writing a one-step expression for a real-world situation
 alge602 Writing a one-step variable expression for a real-world situation
 alge016 Translating a sentence into a one-step equation
 alge291 Translating a phrase into a two-step expression
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge015 Translating a sentence by using an inequality symbol
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge745 Solving a linear inequality: Problem type 5
 alge807 Finding the next terms of a sequence with whole numbers
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge282 Function tables with two-step rules
 fun001 Table for a linear function

alge278 Reading a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge279 Plotting a point in quadrant 1
 alge067 Plotting a point in the coordinate plane
 alge280 Graphing a line in quadrant 1
 alge194 Graphing a line given its equation in slope-intercept form
 alge198 Graphing a vertical or horizontal line
 alge263 Interpreting the graphs of two functions
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge828 Interpreting direct variation from a graph

Geometry and Measurement

geom525 Computing distances between decimals on the number line
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom866 Perimeter and area on a grid
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom340 Area of a piecewise rectangular figure
 geom801 Area of a triangle
 geom001 Finding an angle measure of a triangle given two angles
 geom044 Pythagorean Theorem
 geom016 Circumference of a circle
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom219 Nets of solids
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom035 Volume of a cylinder
 geom031 Surface area of a cube or a rectangular prism
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit012 Time unit conversion with whole number values
 mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 mstat003 Mode of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event

B.30 Algebra 1

Arithmetic Readiness

arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith101 Estimating a sum of whole numbers
arith233 Introduction to exponents
arith692 Writing expressions using exponents
arith683 Power of 10: Positive exponent
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
alge731 Evaluating an algebraic expression: Whole numbers with two operations
alge832 Evaluating an algebraic expression: Whole number operations and exponents
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1

geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents

alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation

alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line

alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept

alge883 Graphing a line given its equation in point-slope form
alge198 Graphing a vertical or horizontal line
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge884 Finding x - and y -intercepts given the graph of a line on a grid
alge924 Finding x - and y -intercepts of a line given the equation: Basic
alge210 Finding x - and y -intercepts of a line given the equation: Advanced
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
alge892 Writing an equation and graphing a line given its slope and y -intercept
alge070 Writing an equation of a line given the y -intercept and another point
alge893 Writing an equation in slope-intercept form given the slope and a point
alge894 Writing an equation in point-slope form given the slope and a point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
mstat052 Identifying independent and dependent variables from equations or real-world situations
alge990 Domain and range of a linear function that models a real-world situation
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge895 Identifying parallel and perpendicular lines from equations
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
alge991 Solving a linear equation by graphing
mstat051 Choosing a graph to fit a narrative: Advanced
alge828 Interpreting direct variation from a graph
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
alge925 Finding the next terms of an arithmetic sequence with whole numbers
alge906 Finding the next terms of an arithmetic sequence with integers
alge979 Identifying arithmetic sequences and finding the common difference
alge931 Finding a specified term of an arithmetic sequence given the first terms
pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
alge909 Writing an explicit rule for an arithmetic sequence
alge908 Finding the first terms of a sequence using a recursive rule
alge910 Writing a recursive rule for an arithmetic sequence
mstat023 Scatter plots and correlation
mstat030 Sketching the line of best fit
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat069 Computing residuals
mstat070 Interpreting residual plots
mstat071 Linear relationship and the correlation coefficient
mstat074 Identifying correlation and causation
alge898 Translating the graph of an absolute value function: One step
alge899 Translating the graph of an absolute value function: Two steps
alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
alge900 Graphing an absolute value equation in the plane: Basic
alge168 Graphing an absolute value equation in the plane: Advanced
alge901 How the leading coefficient affects the graph of an absolute value function

alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1

alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate

alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation

fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values

alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values

stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.31 CA Algebra 1

Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number

arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom031 Surface area of a cube or a rectangular prism
geom091 Surface area of a triangular prism
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom842 Surface area of a sphere
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere

geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
mstat038 Reading the temperature from a thermometer
arith699 Writing a signed number for a real-world situation
alge286 Plotting integers on a number line
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith712 Ordering real numbers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith116 Signed fraction addition or subtraction: Basic
arith106 Signed fraction addition or subtraction: Advanced
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
alge984 Classifying sums and products as rational or irrational
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
arith071 Absolute value of a number
arith104 Operations with absolute value: Problem type 2
geom525 Computing distances between decimals on the number line
alge187 Properties of addition
alge188 Properties of real numbers
arith657 Understanding the distributive property
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
alge663 Combining like terms: Advanced
alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
alge801 Additive property of equality with fractions and mixed numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers
alge266 Additive property of equality with a negative coefficient
alge836 Additive property of equality with signed fractions
alge008 Multiplicative property of equality with whole numbers
alge820 Multiplicative property of equality with fractions

alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)/b = c/d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2

geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4

alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y -intercept
 alge070 Writing an equation of a line given the y -intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation

alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations

alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest

alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1

alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square

arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced

arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.32 Traditional Algebra 1

Arithmetic Readiness

arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith101 Estimating a sum of whole numbers
arith233 Introduction to exponents
arith692 Writing expressions using exponents
arith683 Power of 10: Positive exponent
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
alge731 Evaluating an algebraic expression: Whole numbers with two operations
alge832 Evaluating an algebraic expression: Whole number operations and exponents
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number

arith083 Division of a decimal by a power of ten
 arith019 Division of a decimal by a 2-digit decimal
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith628 Word problem with multiple decimal operations: Problem type 1
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational

arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation

alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality

alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form

alge197 Graphing a line given its x- and y-intercepts
 alge881 Graphing a line by first finding its x- and y-intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y-intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge070 Writing an equation of a line given the y-intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps

alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents

alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

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alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate

alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

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alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients

alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

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alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
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alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

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mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics

mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.33 H.S. Geometry

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arith233 Introduction to exponents
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith067 Simplifying a fraction
 arith212 Equivalent fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith711 Division involving zero
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith813 Multiplication of 3 fractions
 arith821 Exponents and fractions
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith695 Complex fraction without variables: Problem type 1

arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith733 Using a calculator to convert a fraction to a rounded decimal
arith624 Addition of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
alge286 Plotting integers on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith118 Order of operations with integers
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith822 Signed fraction multiplication: Basic
arith117 Signed decimal addition and subtraction
arith702 Exponents and integers: Problem type 1
arith704 Exponents and signed fractions
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith440 Operations with absolute value: Problem type 1
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
alge608 Using distribution and combining like terms to simplify: Univariate
alge293 Combining like terms in a quadratic expression
alge432 Introduction to adding fractions with variables and common denominators
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers

alge836 Additive property of equality with signed fractions
alge008 Multiplicative property of equality with whole numbers
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions
alge825 Multiplicative property of equality with decimals
alge797 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge803 Using two steps to solve an equation with whole numbers
alge266 Additive property of equality with a negative coefficient
alge006 Solving a two-step equation with integers
alge815 Introduction to using substitution to solve a linear equation
alge200 Solving an equation to find the value of an expression
alge920 Introduction to solving an equation with parentheses
alge837 Solving a multi-step equation given in fractional form
alge986 Identifying properties used to solve a linear equation
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge208 Solving a two-step equation with signed fractions
alge603 Introduction to solving an absolute value equation
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge831 Translating a phrase into a one-step expression
alge016 Translating a sentence into a one-step equation
arith504 Writing an equation to represent a proportional relationship
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
arith834 Converting between percentages and decimals
arith843 Using a calculator to convert a fraction to a rounded percentage
arith030 Finding a percentage of a whole number without a calculator: Basic
arith840 Finding a percentage of a whole number
arith862 Applying the percent equation: Problem type 1
arith686 Writing a ratio as a percentage
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith858 Finding the percentage increase or decrease: Basic
alge015 Translating a sentence by using an inequality symbol
alge653 Introduction to identifying solutions to an inequality
alge017 Graphing a linear inequality on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge652 Identifying solutions to a one-step linear inequality
alge848 Additive property of inequality with whole numbers
alge849 Additive property of inequality with integers
alge809 Multiplicative property of inequality with whole numbers
alge854 Multiplicative property of inequality with integers
alge964 Multiplicative property of inequality with signed fractions
alge844 Identifying solutions to a two-step linear inequality in one variable

alge636 Solving a two-step linear inequality with whole numbers
alge855 Solving a two-step linear inequality: Problem type 1
alge856 Solving a two-step linear inequality: Problem type 2
alge857 Solving a two-step linear inequality with a fractional coefficient
alge024 Introduction to the product rule of exponents
alge311 Product rule with positive exponents: Univariate
alge306 Introduction to the power of a power rule of exponents
alge305 Introduction to the power of a product rule of exponents
alge451 Simplifying a ratio of multivariate monomials: Basic
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
alge798 Simplifying a sum or difference of two univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge764 Multiplying conjugate binomials: Univariate
alge765 Multiplying binomials in two variables
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
arith056 Factors
arith033 Greatest common factor of 2 numbers
alge605 Factoring a linear binomial
alge736 Introduction to the GCF of two monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge936 Factoring out a constant before factoring a quadratic
alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
alge944 Factoring a perfect square trinomial with leading coefficient 1
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root
arith601 Square root of a rational perfect square
arith760 Square roots of perfect squares with signs
arith761 Square roots of integers raised to even exponents
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
alge537 Using absolute value to simplify square roots of perfect square monomials
arith094 Cube root of an integer
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
arith767 Introduction to square root addition or subtraction
arith766 Simplifying a quotient of square roots
alge527 Rationalizing a denominator: Quotient involving square roots
alge528 Rationalizing a denominator: Square root of a fraction
alge400 Introduction to solving a radical equation
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge698 Solving an equation of the form $x^3 = a$ using integers
alge681 Solving an equation written in factored form
alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge962 Solving an equation of the form $x^2 = a$ using the square root property
alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge095 Applying the quadratic formula: Exact answers

alge963 Applying the quadratic formula: Decimal answers
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom564 Finding side lengths of squares given an area and a perimeter
 geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom410 Word problem involving the area of a square or a rectangle
 geom142 Word problem involving the area between two rectangles
 geom444 Word problem on optimizing an area or perimeter
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit034 Converting between metric and U.S. Customary unit systems
 unit009 U.S. Customary area unit conversion with whole number values
 unit010 Metric area unit conversion with decimal values

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geom349 Naming segments, rays, and lines
 geom459 Analyzing relationships between points, lines, and planes given a figure
 geom359 Identifying congruent shapes on a grid
 geom358 Identifying parallel and perpendicular lines
 geom407 Matching basic geometric terms with their definitions
 geom392 Introduction to segment addition
 alge694 Computing the distance between two integers on a number line
 geom394 Computing distances between decimals on a number line
 geom393 Finding a point on a number line given the length of a segment and another point
 geom395 Midpoint of a number line segment: Integers
 geom396 Midpoint of a number line segment: Decimals
 geom397 Using a segment's midpoint and endpoint to locate the other endpoint
 geom521 Segment addition and midpoints
 geom399 Finding a point that partitions a number line segment in a given fractional relationship
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane

alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge850 Table for a linear equation
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom458 Identifying congruent segments in the plane
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 geom406 Finding a point that partitions a segment in the plane in a given fractional relationship
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom460 Naming angles, sides of angles, and vertices
 geom039 Finding supplementary and complementary angles
 geom454 Introduction to angle addition
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom800 Identifying linear pairs and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom500 Solving equations involving vertical angles and linear pairs
 geom389 Constructing congruent line segments
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom154 Constructing the perpendicular bisector of a line segment
 geom457 Making conjectures given a geometric construction

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alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge732 Finding patterns in shapes
 mstat042 Interpreting a Venn diagram of 2 sets
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic011 Writing the converse, inverse, and contrapositive of a conditional statement and determining their truth values
 glogic012 Writing a biconditional statement as a conditional statement and its converse and determining truth values
 glogic013 Finding counterexamples to conjectures
 glogic008 Conditional statements and deductive reasoning
 geom665 Distinguishing between undefined terms, definitions, postulates, conjectures, and theorems
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom611 Proofs involving angle congruence

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geom304 Identifying corresponding and alternate angles
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom503 Solving equations involving angles and two pairs of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 fun001 Table for a linear function
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge259 Graphing a line given its slope and y -intercept
 alge196 Graphing a line through a given point with a given slope
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y -intercept
 alge258 Writing an equation of a line given its slope and y -intercept
 alge892 Writing an equation and graphing a line given its slope and y -intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge318 Finding the slope and a point on a line given its equation in point-slope form
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge313 Writing an equation in standard form given the slope and a point
 alge070 Writing an equation of a line given the y -intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 geom462 Identifying parallel and perpendicular lines from coordinates
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition

Triangles

geom306 Acute, obtuse, and right triangles
 geom626 Classifying scalene, isosceles, and equilateral triangles by side lengths
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles

geom322 Identifying coordinates that give right triangles
 geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom628 Finding angle measures of a triangle given angles with variables
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom357 Identifying transformations
 geom519 Identifying and naming congruent parts of congruent triangles
 geom325 Determining if figures are related by rigid motions
 geom327 Examining triangle congruence in terms of rigid motion
 geom329 Exploring the triangle congruence theorems
 geom418 Completing proofs involving congruent triangles using SSS or SAS
 geom420 Introduction to proving triangles congruent using SSS or SAS
 geom520 Identifying and naming congruent triangles
 geom419 Completing proofs involving congruent triangles using ASA or AAS
 geom421 Introduction to proving triangles congruent using ASA or AAS
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom647 Separating overlapping triangles and identifying common features
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom423 Proofs involving congruent triangles with parallel or perpendicular segments
 geom424 Determining when to apply the HL congruence property
 geom425 Introduction to proving triangles congruent using the HL property
 geom422 Introduction to proofs involving congruent triangles and CPCTC
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom645 Finding side lengths and angle measures of isosceles and equilateral triangles
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom629 Finding angle measures of an isosceles triangle given angles with variables
 geom363 Proofs of theorems involving isosceles triangles
 geom449 Classifying segments inside triangles
 geom446 Using the circumcenter of a triangle to find segment lengths
 geom447 Using the incenter of a triangle to find segment lengths and angle measures
 geom448 Using the centroid of a triangle to find segment lengths
 geom413 Introduction to the triangle midsegment theorem
 geom324 Proving the triangle midsegment theorem in the coordinate plane
 geom441 Proof involving points on the perpendicular bisector of a line segment
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom664 Using triangle inequality to determine possible lengths of a third side
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom543 Drawing a circle with a given radius or diameter
 geom545 Drawing triangles with given side lengths using a compass
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom451 Using the hinge theorem
 geom650 Indirect proof (proof by contradiction)

Polygons and Quadrilaterals

geom361 Naming polygons
 geom870 Sum of the angle measures of a quadrilateral
 geom656 Finding the sum of the interior angle measures of a convex polygon given the number of sides
 geom655 Finding the number of sides of a convex polygon given the sum of the measures of the interior angles

geom657 Finding a missing interior angle measure in a convex polygon
 geom658 Finding the measures of an interior angle and an exterior angle of a regular polygon
 geom659 Finding the number of sides of a regular polygon given the measure of an interior angle
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom436 Finding angle measures involving diagonals of a rhombus
 geom523 Conditions for quadrilaterals
 geom661 Completing proofs of theorems involving sides of a parallelogram
 geom662 Completing proofs of theorems involving angles of a parallelogram
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom818 Finding the coordinates of a point to make a parallelogram
 geom819 Finding coordinates of vertices of polygons
 geom321 Proving that a quadrilateral with given vertices is a parallelogram
 geom408 Classifying parallelograms in the coordinate plane
 geom863 Congruence in the coordinate plane

Similarity

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 alge888 Finding the coordinate that yields a given slope
 geom390 Finding a point that partitions a number line segment in a given ratio
 geom391 Finding a point that partitions a segment in the plane in a given ratio
 geom360 Identifying similar or congruent shapes on a grid
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom475 Triangles and angle bisectors
 geom326 Determining if figures are related by similarity transformations
 geom328 Examining triangle similarity in terms of similarity transformations
 geom364 Identifying and naming similar triangles
 geom365 Proofs involving similar triangles
 geom472 Completing proofs involving the triangle proportionality theorem
 geom461 Proving the slope criterion for parallel or perpendicular lines
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale

Right Triangles and Trigonometry

alge408 Word problem involving the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle

geom862 Using the Pythagorean Theorem repeatedly
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom452 Identifying similar right triangles that overlap
 geom507 Right triangles and geometric mean
 geom473 Proving the Pythagorean Theorem using similar triangles
 geom860 Special right triangles: Decimal answers
 geom506 Special right triangles: Exact answers
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc642 Solving a right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom409 Proving the law of cosines
 pcalc063 Translation of a vector
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 pcalc060 Magnitude of a vector given in component form
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph

Transformations

geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom375 Understanding the definition of a translation
 pcalc038 Addition or subtraction of matrices
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom376 Understanding the definition of a reflection

geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom377 Understanding the definition of a rotation
 geom334 Drawing lines of symmetry
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom831 Rotational and point symmetries
 geom369 Writing a rule to describe a translation
 geom370 Writing a rule to describe a reflection
 geom371 Writing a rule to describe a rotation
 geom373 Identifying transformations that map a quadrilateral onto itself
 geom374 Identifying transformations that map a regular polygon onto itself
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom372 Writing a rule to describe a dilation
 geom582 Determining if figures are similar and related by a sequence of transformations
 geom463 Exploring similarity of circles
 geom379 Exploring the effect of dilation on lines
 pcalc037 Scalar multiplication of a matrix

Area and Volume

geom022 Area of a parallelogram
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom430 Word problem on population density
 geom426 Finding the perimeter of a triangle, trapezoid, or parallelogram in the coordinate plane
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane
 geom440 Finding the area of a right triangle using the Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom439 Using trigonometry to find the area of a right triangle
 pcalc646 Finding the area of a triangle using trigonometry
 geom319 Expressing the area of a triangle in terms of the sine of one of its angles
 pcalc647 Heron's formula
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom023 Area of a trapezoid
 geom434 Area of a rhombus
 geom435 Finding the area of a rhombus using the Pythagorean Theorem
 geom438 Finding the area of a trapezoid, rhombus, or kite in the coordinate plane
 geom213 Area of a regular polygon
 geom479 Finding the area of a regular polygon using special right triangles
 geom481 Side lengths, perimeters, and areas of similar polygons
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom427 Informal argument for the formula of the circumference of a circle
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles

geom026 Area of a circle
geom802 Circumference and area of a circle
geom477 Circumference and area of a circle: Exact answers in terms of pi
geom570 Distinguishing between the area and circumference of a circle
geom428 Informal argument for the formula of the area of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom649 Area involving multiple inscribed figures
geom212 Circles inscribed in and circumscribed about regular polygons
geom126 Area of a sector of a circle: Exact answer in terms of pi
geom429 Informal argument for the formula of the area of a sector
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom219 Nets of solids
geom861 Nets of solids: Advanced
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom381 Identifying solids generated by rotations of two-dimensional regions
geom443 Identifying geometric shapes that model real-world objects
geom491 Identifying properties of Euclidean and spherical geometries
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom578 Word problem involving the surface area of a cylinder
geom484 Word problem involving the surface area of rectangular prisms and cylinders
geom483 Word problem involving the surface area of rectangular prisms and pyramids
geom354 Volume of a rectangular prism made of unit cubes
geom311 Volume of a rectangular prism
geom555 Distinguishing between surface area and volume
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
geom865 Measuring the net of a solid to find surface area or volume
geom382 Volume of an oblique rectangular prism
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom565 Finding the side length of a cube given its volume
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom386 Computations involving density, mass, and volume
geom387 Word problem on density involving the volume of a rectangular solid
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom035 Volume of a cylinder
geom385 Informal argument for the formula of the volume of a cylinder
geom383 Volume of an oblique cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom388 Word problem on density involving the volume of a cylindrical solid
geom384 Using cross sections to identify solids with the same volume
geom133 Ratio of volumes
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid

geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom654 Informal argument for the formula of the volume of a cone
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom842 Surface area of a sphere
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom488 Identifying similar solids
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom489 Computing side length, surface area, and volume for similar solids
 geom490 Word problem involving volumes of similar solids

Circles

geom464 Identifying chords, secants, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom470 Constructing a tangent of a circle
 geom465 Naming and finding measures of central angles, inscribed angles, and arcs of a circle
 geom467 Applying properties of radii, diameters, and chords
 geom814 Angle measure in a circle graph
 geom466 Arc length
 geom805 Arc length and area of a sector of a circle
 geom653 Computing ratios of arc lengths to radii and describing the result
 pcalc002 Converting between degree and radian measure: Problem type 1
 geom468 Central angles and inscribed angles of a circle
 geom469 Central angles and angles involving chords and tangents of a circle
 geom666 Inscribed angles in relation to a diameter or a polygon inscribed in a circle
 geom667 Inscribed angles and angles involving chords and tangents of a circle
 geom492 Establishing facts about a quadrilateral inscribed in a circle
 geom312 Inscribing an equilateral triangle or a regular hexagon in a circle
 geom313 Inscribing a square in a circle
 geom314 Inscribing a circle in a triangle
 geom315 Circumscribing a circle about a triangle
 geom567 Angles of intersecting secants and tangents
 geom568 Lengths of chords, secants, and tangents
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 alge094 Completing the square
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 geom494 Deriving the equation of a parabola given its focus and directrix

Probability

mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram

mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 pcalc809 Introduction to permutations and combinations
 pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat046 Experimental and theoretical probability
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat116 Probabilities of a permutation and a combination
 mstat048 Odds of an event
 mstat011 Area as probability
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat047 Introduction to expectation
 mstat114 Using a random number table to make a fair decision
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 mstat019 Identifying independent events given descriptions of experiments
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 mstat115 Determining outcomes for compound events and complements of events
 mstat110 Using a Venn diagram to understand the multiplication rule for probability
 mstat107 Outcomes and event probability: Conditional probability
 mstat104 Identifying independent events given values of probabilities
 mstat105 Computing conditional probability using a two-way frequency table
 mstat106 Computing conditional probability to make an inference using a two-way frequency table
 mstat118 Conditional probability: Basic
 mstat109 Using a Venn diagram to understand the addition rule for probability
 mstat108 Outcomes and event probability: Addition rule
 mstat032 Probability of the union of two events
 mstat117 Probability of intersection or union: Word problems

B.34 Support for CA H.S. Geometry

Algebra and Deductive Reasoning

arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith056 Factors
 arith070 Least common multiple of 2 numbers
 arith663 Writing ratios for real-world situations
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith230 Addition or subtraction of fractions with different denominators
 arith086 Product of a fraction and a whole number: Problem type 1
 arith053 Fraction multiplication

arith022 Fraction division
arith015 Writing an improper fraction as a mixed number
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith030 Finding a percentage of a whole number without a calculator: Basic
alge286 Plotting integers on a number line
arith691 Ordering integers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith116 Signed fraction addition or subtraction: Basic
arith117 Signed decimal addition and subtraction
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith822 Signed fraction multiplication: Basic
arith118 Order of operations with integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith071 Absolute value of a number
alge731 Evaluating an algebraic expression: Whole numbers with two operations
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge606 Distributive property: Whole number coefficients
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
alge016 Translating a sentence into a one-step equation
alge010 Additive property of equality with integers
alge266 Additive property of equality with a negative coefficient
alge820 Multiplicative property of equality with fractions
alge740 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge006 Solving a two-step equation with integers
alge208 Solving a two-step equation with signed fractions
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge272 Solving a proportion of the form $x/a = b/c$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
arith610 Word problem on proportions: Problem type 1
alge810 Introduction to algebraic symbol manipulation
alge743 Algebraic symbol manipulation: Problem type 1
alge744 Algebraic symbol manipulation: Problem type 2
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge166 Graphing a compound inequality on the number line
alge019 Solving a linear inequality: Problem type 1
arith016 Square root of a perfect square
arith601 Square root of a rational perfect square
arith093 Simplifying the square root of a whole number less than 100
alge086 Rationalizing the denominator of a radical expression
alge807 Finding the next terms of a sequence with whole numbers
alge732 Finding patterns in shapes
mstat042 Interpreting a Venn diagram of 2 sets
mstat043 Interpreting a Venn diagram of 3 sets
glogic001 Conditional statements and negations
glogic005 The converse, inverse, and contrapositive of a conditional statement
glogic008 Conditional statements and deductive reasoning

Lines and Angles

geom349 Naming segments, rays, and lines
 mstat034 Measuring length to the nearest quarter or half inch
 geom525 Computing distances between decimals on the number line
 geom526 Midpoint of a number line segment
 geom521 Segment addition and midpoints
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom358 Identifying parallel and perpendicular lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 geom154 Constructing the perpendicular bisector of a line segment
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom304 Identifying corresponding and alternate angles
 geom305 Identifying supplementary and vertical angles
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom611 Proofs involving angle congruence
 geom159 Constructing congruent angles
 geom158 Constructing an angle bisector

Triangles

geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom801 Area of a triangle
 geom001 Finding an angle measure of a triangle given two angles
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom845 Using triangle inequality to determine possible lengths of a third side
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom650 Indirect proof (proof by contradiction)
 geom520 Identifying and naming congruent triangles
 geom617 Proofs involving congruent triangles and vertical angles or the reflexive property
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom044 Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom506 Special right triangles: Exact answers
 geom212 Circles inscribed in and circumscribed about regular polygons
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle

pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc033 Solving a triangle with the law of cosines

Polygons and Circles

geom310 Properties of quadrilaterals
 geom523 Conditions for quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom834 Finding measures involving diagonals of rhombi
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon
 geom853 Interior and exterior angle measures in a regular polygon
 geom819 Finding coordinates of vertices of polygons
 geom818 Finding the coordinates of a point to make a parallelogram
 geom863 Congruence in the coordinate plane
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom078 Sides of polygons having the same perimeter
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alge724 Finding an area in terms of variables
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom511 Lengths of chords, secants, and tangents
 geom514 Inscribed angles of a circle
 geom512 Central angles and inscribed angles of a circle
 geom513 Angles of intersecting secants and tangents
 geom814 Angle measure in a circle graph
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom805 Arc length and area of a sector of a circle
 geom036 Word problem involving the area between two concentric circles
 geom302 Area involving rectangles and circles
 geom214 Area involving inscribed figures
 mstat011 Area as probability

Similarities and Transformations

geom359 Identifying congruent shapes on a grid
geom360 Identifying similar or congruent shapes on a grid
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
geom510 Triangles and parallel lines
geom507 Right triangles and geometric mean
geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
geom847 Similar solids: Problem type 2
geom357 Identifying transformations
geom330 Translating a polygon
geom331 Using a translated point to find coordinates of other translated points
geom332 Reflecting a polygon over a vertical or horizontal line
geom333 Finding the coordinates of three points reflected over an axis
geom334 Drawing lines of symmetry
geom335 Rotating a figure about the origin
geom815 Finding an angle of rotation
geom831 Rotational and point symmetries
geom336 Dilating a figure

Volumes and Surface Areas

geom830 Counting the cubes in a solid made of cubes
geom354 Volume of a rectangular prism made of unit cubes
geom311 Volume of a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere
geom219 Nets of solids
geom861 Nets of solids: Advanced
geom348 Vertices, edges, and faces of a solid
geom816 Side views of a solid made of cubes
geom031 Surface area of a cube or a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom842 Surface area of a sphere
geom338 Surface area involving prisms or cylinders

Coordinate Geometry

alge067 Plotting a point in the coordinate plane
alge197 Graphing a line given its x- and y-intercepts
alge194 Graphing a line given its equation in slope-intercept form
alge195 Graphing a line given its equation in standard form
alge196 Graphing a line through a given point with a given slope
alge198 Graphing a vertical or horizontal line
alge210 Finding x- and y-intercepts of a line given the equation: Advanced
alge684 Finding slope given the graph of a line on a grid
alge685 Finding slope given two points on the line
alge631 Finding the slope of a line given its equation

alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge191 Midpoint of a line segment in the plane
 alge132 Distance between two points in the plane: Exact answers
 pcalc605 Graphing a circle given its equation in standard form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 pcalc060 Magnitude of a vector given in component form
 pcalc063 Translation of a vector
 geom858 Scalar multiplication of a vector: Geometric Approach
 geom857 Vector addition: Geometric approach
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph
 pcalc038 Addition or subtraction of matrices
 pcalc037 Scalar multiplication of a matrix
 pcalc740 Linear combination of matrices

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Algebra and Deductive Reasoning

arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith056 Factors
 arith070 Least common multiple of 2 numbers
 arith663 Writing ratios for real-world situations
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith230 Addition or subtraction of fractions with different denominators
 arith086 Product of a fraction and a whole number: Problem type 1
 arith053 Fraction multiplication
 arith022 Fraction division
 arith015 Writing an improper fraction as a mixed number
 arith110 Decimal place value: Tenths and hundredths
 arith221 Rounding decimals
 arith030 Finding a percentage of a whole number without a calculator: Basic
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith116 Signed fraction addition or subtraction: Basic
 arith117 Signed decimal addition and subtraction
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith118 Order of operations with integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2

arith704 Exponents and signed fractions
 arith071 Absolute value of a number
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge606 Distributive property: Whole number coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge016 Translating a sentence into a one-step equation
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge820 Multiplicative property of equality with fractions
 alge740 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge272 Solving a proportion of the form $x/a = b/c$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith610 Word problem on proportions: Problem type 1
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line
 alge019 Solving a linear inequality: Problem type 1
 arith016 Square root of a perfect square
 arith601 Square root of a rational perfect square
 arith093 Simplifying the square root of a whole number less than 100
 alge086 Rationalizing the denominator of a radical expression
 alge807 Finding the next terms of a sequence with whole numbers
 alge732 Finding patterns in shapes
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 logic001 Conditional statements and negations
 logic005 The converse, inverse, and contrapositive of a conditional statement
 logic008 Conditional statements and deductive reasoning

Lines and Angles

geom349 Naming segments, rays, and lines
 mstat034 Measuring length to the nearest quarter or half inch
 geom525 Computing distances between decimals on the number line
 geom526 Midpoint of a number line segment
 geom521 Segment addition and midpoints
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom358 Identifying parallel and perpendicular lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 geom154 Constructing the perpendicular bisector of a line segment
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles

geom304 Identifying corresponding and alternate angles
 geom305 Identifying supplementary and vertical angles
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom611 Proofs involving angle congruence
 geom159 Constructing congruent angles
 geom158 Constructing an angle bisector

Triangles

geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom801 Area of a triangle
 geom001 Finding an angle measure of a triangle given two angles
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom845 Using triangle inequality to determine possible lengths of a third side
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom650 Indirect proof (proof by contradiction)
 geom520 Identifying and naming congruent triangles
 geom617 Proofs involving congruent triangles and vertical angles or the reflexive property
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom044 Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom506 Special right triangles: Exact answers
 geom212 Circles inscribed in and circumscribed about regular polygons
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc033 Solving a triangle with the law of cosines

Polygons and Circles

geom310 Properties of quadrilaterals
 geom523 Conditions for quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom834 Finding measures involving diagonals of rhombi
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

geom853 Interior and exterior angle measures in a regular polygon
 geom819 Finding coordinates of vertices of polygons
 geom818 Finding the coordinates of a point to make a parallelogram
 geom863 Congruence in the coordinate plane
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom078 Sides of polygons having the same perimeter
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alg724 Finding an area in terms of variables
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom511 Lengths of chords, secants, and tangents
 geom514 Inscribed angles of a circle
 geom512 Central angles and inscribed angles of a circle
 geom513 Angles of intersecting secants and tangents
 geom814 Angle measure in a circle graph
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 geom218 Finding the radius or the diameter of a circle given its circumference
 geom301 Perimeter involving rectangles and circles
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 geom802 Circumference and area of a circle
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 mstat011 Area as probability

Similarities and Transformations

geom359 Identifying congruent shapes on a grid
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 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom507 Right triangles and geometric mean
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2
 geom357 Identifying transformations
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry

geom335 Rotating a figure about the origin
 geom815 Finding an angle of rotation
 geom831 Rotational and point symmetries
 geom336 Dilating a figure

Volumes and Surface Areas

geom830 Counting the cubes in a solid made of cubes
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of π
 geom841 Volume of a sphere
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom348 Vertices, edges, and faces of a solid
 geom816 Side views of a solid made of cubes
 geom031 Surface area of a cube or a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of π
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders

Coordinate Geometry

alge067 Plotting a point in the coordinate plane
 alge197 Graphing a line given its x - and y -intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y -intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge191 Midpoint of a line segment in the plane
 alge132 Distance between two points in the plane: Exact answers
 pcalc605 Graphing a circle given its equation in standard form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 pcalc060 Magnitude of a vector given in component form
 pcalc063 Translation of a vector
 geom858 Scalar multiplication of a vector: Geometric Approach
 geom857 Vector addition: Geometric approach
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 vector002 Finding the magnitude and direction of a vector given its graph

vector005 Finding the components of a vector given its graph
 pcalc038 Addition or subtraction of matrices
 pcalc037 Scalar multiplication of a matrix
 pcalc740 Linear combination of matrices

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Algebra Review

arith233 Introduction to exponents
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith067 Simplifying a fraction
 arith212 Equivalent fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith711 Division involving zero
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith813 Multiplication of 3 fractions
 arith821 Exponents and fractions
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith695 Complex fraction without variables: Problem type 1
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith068 Mixed number division
 arith110 Decimal place value: Tenths and hundredths
 arith221 Rounding decimals
 arith129 Introduction to ordering decimals
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith624 Addition of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith082 Multiplication of a decimal by a power of ten
 arith081 Division of a decimal by a whole number
 arith083 Division of a decimal by a power of ten
 alge286 Plotting integers on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith200 Integer addition: Problem type 1

arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith118 Order of operations with integers
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith822 Signed fraction multiplication: Basic
 arith117 Signed decimal addition and subtraction
 arith702 Exponents and integers: Problem type 1
 arith704 Exponents and signed fractions
 arith071 Absolute value of a number
 arith412 Finding all numbers with a given absolute value
 arith440 Operations with absolute value: Problem type 1
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge649 Evaluating a formula
 alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge293 Combining like terms in a quadratic expression
 alge432 Introduction to adding fractions with variables and common denominators
 alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge815 Introduction to using substitution to solve a linear equation
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution

alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge208 Solving a two-step equation with signed fractions
alge603 Introduction to solving an absolute value equation
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge831 Translating a phrase into a one-step expression
alge016 Translating a sentence into a one-step equation
arith504 Writing an equation to represent a proportional relationship
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
arith834 Converting between percentages and decimals
arith843 Using a calculator to convert a fraction to a rounded percentage
arith030 Finding a percentage of a whole number without a calculator: Basic
arith840 Finding a percentage of a whole number
arith862 Applying the percent equation: Problem type 1
arith686 Writing a ratio as a percentage
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith858 Finding the percentage increase or decrease: Basic
alge015 Translating a sentence by using an inequality symbol
alge653 Introduction to identifying solutions to an inequality
alge017 Graphing a linear inequality on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge652 Identifying solutions to a one-step linear inequality
alge848 Additive property of inequality with whole numbers
alge849 Additive property of inequality with integers
alge809 Multiplicative property of inequality with whole numbers
alge854 Multiplicative property of inequality with integers
alge964 Multiplicative property of inequality with signed fractions
alge844 Identifying solutions to a two-step linear inequality in one variable
alge636 Solving a two-step linear inequality with whole numbers
alge855 Solving a two-step linear inequality: Problem type 1
alge856 Solving a two-step linear inequality: Problem type 2
alge857 Solving a two-step linear inequality with a fractional coefficient
alge024 Introduction to the product rule of exponents
alge311 Product rule with positive exponents: Univariate
alge306 Introduction to the power of a power rule of exponents
alge305 Introduction to the power of a product rule of exponents
alge451 Simplifying a ratio of multivariate monomials: Basic
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
alge798 Simplifying a sum or difference of two univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge764 Multiplying conjugate binomials: Univariate
alge765 Multiplying binomials in two variables
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
arith056 Factors
arith033 Greatest common factor of 2 numbers
alge605 Factoring a linear binomial
alge736 Introduction to the GCF of two monomials

alge738 Factoring out a monomial from a polynomial: Univariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 arith016 Square root of a perfect square
 arith763 Using a calculator to approximate a square root
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith761 Square roots of integers raised to even exponents
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 alge537 Using absolute value to simplify square roots of perfect square monomials
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 alge520 Introduction to simplifying a radical expression with an odd exponent
 alge521 Simplifying a radical expression with an odd exponent
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith767 Introduction to square root addition or subtraction
 arith766 Simplifying a quotient of square roots
 alge527 Rationalizing a denominator: Quotient involving square roots
 alge528 Rationalizing a denominator: Square root of a fraction
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom564 Finding side lengths of squares given an area and a perimeter
 geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom410 Word problem involving the area of a square or a rectangle

geom142 Word problem involving the area between two rectangles
 geom444 Word problem on optimizing an area or perimeter
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit034 Converting between metric and U.S. Customary unit systems
 unit009 U.S. Customary area unit conversion with whole number values
 unit010 Metric area unit conversion with decimal values

Segments and Angles

geom349 Naming segments, rays, and lines
 geom459 Analyzing relationships between points, lines, and planes given a figure
 geom359 Identifying congruent shapes on a grid
 geom358 Identifying parallel and perpendicular lines
 geom407 Matching basic geometric terms with their definitions
 geom392 Introduction to segment addition
 alge694 Computing the distance between two integers on a number line
 geom394 Computing distances between decimals on a number line
 geom393 Finding a point on a number line given the length of a segment and another point
 geom395 Midpoint of a number line segment: Integers
 geom396 Midpoint of a number line segment: Decimals
 geom397 Using a segment's midpoint and endpoint to locate the other endpoint
 geom521 Segment addition and midpoints
 geom399 Finding a point that partitions a number line segment in a given fractional relationship
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge850 Table for a linear equation
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom458 Identifying congruent segments in the plane
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 geom406 Finding a point that partitions a segment in the plane in a given fractional relationship
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom460 Naming angles, sides of angles, and vertices
 geom039 Finding supplementary and complementary angles
 geom454 Introduction to angle addition
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles

geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom800 Identifying linear pairs and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom500 Solving equations involving vertical angles and linear pairs
 geom389 Constructing congruent line segments
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom154 Constructing the perpendicular bisector of a line segment
 geom457 Making conjectures given a geometric construction

Reasoning

alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge732 Finding patterns in shapes
 mstat042 Interpreting a Venn diagram of 2 sets
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic011 Writing the converse, inverse, and contrapositive of a conditional statement and determining their truth values
 glogic012 Writing a biconditional statement as a conditional statement and its converse and determining truth values
 glogic013 Finding counterexamples to conjectures
 glogic008 Conditional statements and deductive reasoning
 geom665 Distinguishing between undefined terms, definitions, postulates, conjectures, and theorems
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom611 Proofs involving angle congruence

Lines

geom304 Identifying corresponding and alternate angles
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom503 Solving equations involving angles and two pairs of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 fun001 Table for a linear function
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid

alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge318 Finding the slope and a point on a line given its equation in point-slope form
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge313 Writing an equation in standard form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 geom462 Identifying parallel and perpendicular lines from coordinates
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition

Triangles

geom306 Acute, obtuse, and right triangles
 geom626 Classifying scalene, isosceles, and equilateral triangles by side lengths
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom322 Identifying coordinates that give right triangles
 geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom628 Finding angle measures of a triangle given angles with variables
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom357 Identifying transformations
 geom519 Identifying and naming congruent parts of congruent triangles
 geom325 Determining if figures are related by rigid motions
 geom327 Examining triangle congruence in terms of rigid motion
 geom329 Exploring the triangle congruence theorems
 geom418 Completing proofs involving congruent triangles using SSS or SAS
 geom420 Introduction to proving triangles congruent using SSS or SAS
 geom520 Identifying and naming congruent triangles
 geom419 Completing proofs involving congruent triangles using ASA or AAS
 geom421 Introduction to proving triangles congruent using ASA or AAS
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom647 Separating overlapping triangles and identifying common features
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom423 Proofs involving congruent triangles with parallel or perpendicular segments
 geom424 Determining when to apply the HL congruence property

geom425 Introduction to proving triangles congruent using the HL property
 geom422 Introduction to proofs involving congruent triangles and CPCTC
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom645 Finding side lengths and angle measures of isosceles and equilateral triangles
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom629 Finding angle measures of an isosceles triangle given angles with variables
 geom363 Proofs of theorems involving isosceles triangles
 geom449 Classifying segments inside triangles
 geom446 Using the circumcenter of a triangle to find segment lengths
 geom447 Using the incenter of a triangle to find segment lengths and angle measures
 geom448 Using the centroid of a triangle to find segment lengths
 geom413 Introduction to the triangle midsegment theorem
 geom324 Proving the triangle midsegment theorem in the coordinate plane
 geom441 Proof involving points on the perpendicular bisector of a line segment
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom664 Using triangle inequality to determine possible lengths of a third side
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom543 Drawing a circle with a given radius or diameter
 geom545 Drawing triangles with given side lengths using a compass
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom451 Using the hinge theorem
 geom650 Indirect proof (proof by contradiction)

Polygons and Quadrilaterals

geom361 Naming polygons
 geom870 Sum of the angle measures of a quadrilateral
 geom656 Finding the sum of the interior angle measures of a convex polygon given the number of sides
 geom655 Finding the number of sides of a convex polygon given the sum of the measures of the interior angles
 geom657 Finding a missing interior angle measure in a convex polygon
 geom658 Finding the measures of an interior angle and an exterior angle of a regular polygon
 geom659 Finding the number of sides of a regular polygon given the measure of an interior angle
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom436 Finding angle measures involving diagonals of a rhombus
 geom523 Conditions for quadrilaterals
 geom661 Completing proofs of theorems involving sides of a parallelogram
 geom662 Completing proofs of theorems involving angles of a parallelogram
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom818 Finding the coordinates of a point to make a parallelogram
 geom819 Finding coordinates of vertices of polygons
 geom321 Proving that a quadrilateral with given vertices is a parallelogram
 geom408 Classifying parallelograms in the coordinate plane
 geom863 Congruence in the coordinate plane

Similarity

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 alge888 Finding the coordinate that yields a given slope
 geom390 Finding a point that partitions a number line segment in a given ratio
 geom391 Finding a point that partitions a segment in the plane in a given ratio
 geom360 Identifying similar or congruent shapes on a grid
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom475 Triangles and angle bisectors
 geom326 Determining if figures are related by similarity transformations
 geom328 Examining triangle similarity in terms of similarity transformations
 geom364 Identifying and naming similar triangles
 geom365 Proofs involving similar triangles
 geom472 Completing proofs involving the triangle proportionality theorem
 geom461 Proving the slope criterion for parallel or perpendicular lines
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale

Right Triangles and Trigonometry

alge408 Word problem involving the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
 geom862 Using the Pythagorean Theorem repeatedly
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom452 Identifying similar right triangles that overlap
 geom507 Right triangles and geometric mean
 geom473 Proving the Pythagorean Theorem using similar triangles
 geom860 Special right triangles: Decimal answers
 geom506 Special right triangles: Exact answers
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc642 Solving a right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2

pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom409 Proving the law of cosines
 pcalc063 Translation of a vector
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 pcalc060 Magnitude of a vector given in component form
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph

Transformations

geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom375 Understanding the definition of a translation
 pcalc038 Addition or subtraction of matrices
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom376 Understanding the definition of a reflection
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom377 Understanding the definition of a rotation
 geom334 Drawing lines of symmetry
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom831 Rotational and point symmetries
 geom369 Writing a rule to describe a translation
 geom370 Writing a rule to describe a reflection
 geom371 Writing a rule to describe a rotation
 geom373 Identifying transformations that map a quadrilateral onto itself
 geom374 Identifying transformations that map a regular polygon onto itself
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom372 Writing a rule to describe a dilation
 geom582 Determining if figures are similar and related by a sequence of transformations

geom463 Exploring similarity of circles
 geom379 Exploring the effect of dilation on lines
 pcalc037 Scalar multiplication of a matrix

Area and Volume

geom022 Area of a parallelogram
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom430 Word problem on population density
 geom426 Finding the perimeter of a triangle, trapezoid, or parallelogram in the coordinate plane
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane
 geom440 Finding the area of a right triangle using the Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom439 Using trigonometry to find the area of a right triangle
 pcalc646 Finding the area of a triangle using trigonometry
 geom319 Expressing the area of a triangle in terms of the sine of one of its angles
 pcalc647 Heron's formula
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom023 Area of a trapezoid
 geom434 Area of a rhombus
 geom435 Finding the area of a rhombus using the Pythagorean Theorem
 geom438 Finding the area of a trapezoid, rhombus, or kite in the coordinate plane
 geom213 Area of a regular polygon
 geom479 Finding the area of a regular polygon using special right triangles
 geom481 Side lengths, perimeters, and areas of similar polygons
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom427 Informal argument for the formula of the circumference of a circle
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom477 Circumference and area of a circle: Exact answers in terms of pi
 geom570 Distinguishing between the area and circumference of a circle
 geom428 Informal argument for the formula of the area of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom649 Area involving multiple inscribed figures
 geom212 Circles inscribed in and circumscribed about regular polygons
 geom126 Area of a sector of a circle: Exact answer in terms of pi
 geom429 Informal argument for the formula of the area of a sector
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom381 Identifying solids generated by rotations of two-dimensional regions
 geom443 Identifying geometric shapes that model real-world objects
 geom491 Identifying properties of Euclidean and spherical geometries

geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom484 Word problem involving the surface area of rectangular prisms and cylinders
 geom483 Word problem involving the surface area of rectangular prisms and pyramids
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom555 Distinguishing between surface area and volume
 geom518 Volume of a solid made of cubes with unit fraction edge lengths
 geom535 Volume of a rectangular prism with fractional edge lengths
 geom865 Measuring the net of a solid to find surface area or volume
 geom382 Volume of an oblique rectangular prism
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom565 Finding the side length of a cube given its volume
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom386 Computations involving density, mass, and volume
 geom387 Word problem on density involving the volume of a rectangular solid
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom035 Volume of a cylinder
 geom385 Informal argument for the formula of the volume of a cylinder
 geom383 Volume of an oblique cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom388 Word problem on density involving the volume of a cylindrical solid
 geom384 Using cross sections to identify solids with the same volume
 geom133 Ratio of volumes
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom654 Informal argument for the formula of the volume of a cone
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom842 Surface area of a sphere
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom488 Identifying similar solids
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom489 Computing side length, surface area, and volume for similar solids
 geom490 Word problem involving volumes of similar solids

Circles

geom464 Identifying chords, secants, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom470 Constructing a tangent of a circle
 geom465 Naming and finding measures of central angles, inscribed angles, and arcs of a circle
 geom467 Applying properties of radii, diameters, and chords

geom814 Angle measure in a circle graph
 geom466 Arc length
 geom805 Arc length and area of a sector of a circle
 geom653 Computing ratios of arc lengths to radii and describing the result
 pcalc002 Converting between degree and radian measure: Problem type 1
 geom468 Central angles and inscribed angles of a circle
 geom469 Central angles and angles involving chords and tangents of a circle
 geom666 Inscribed angles in relation to a diameter or a polygon inscribed in a circle
 geom667 Inscribed angles and angles involving chords and tangents of a circle
 geom492 Establishing facts about a quadrilateral inscribed in a circle
 geom312 Inscribing an equilateral triangle or a regular hexagon in a circle
 geom313 Inscribing a square in a circle
 geom314 Inscribing a circle in a triangle
 geom315 Circumscribing a circle about a triangle
 geom567 Angles of intersecting secants and tangents
 geom568 Lengths of chords, secants, and tangents
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 alge094 Completing the square
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 geom494 Deriving the equation of a parabola given its focus and directrix

Probability

mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 pcalc809 Introduction to permutations and combinations
 pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat046 Experimental and theoretical probability
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat116 Probabilities of a permutation and a combination
 mstat048 Odds of an event
 mstat011 Area as probability
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat047 Introduction to expectation
 mstat114 Using a random number table to make a fair decision
 mstat097 Constructing a two-way frequency table: Basic

mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 mstat019 Identifying independent events given descriptions of experiments
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 mstat115 Determining outcomes for compound events and complements of events
 mstat110 Using a Venn diagram to understand the multiplication rule for probability
 mstat107 Outcomes and event probability: Conditional probability
 mstat104 Identifying independent events given values of probabilities
 mstat105 Computing conditional probability using a two-way frequency table
 mstat106 Computing conditional probability to make an inference using a two-way frequency table
 mstat118 Conditional probability: Basic
 mstat109 Using a Venn diagram to understand the addition rule for probability
 mstat108 Outcomes and event probability: Addition rule
 mstat032 Probability of the union of two events
 mstat117 Probability of intersection or union: Word problems

B.37 Integrated Mathematics I

Arithmetic Readiness

arith067 Simplifying a fraction
 arith212 Equivalent fractions
 arith711 Division involving zero
 arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers
 arith418 Word problem involving the least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith801 Finding the LCD of two fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith802 Addition or subtraction of fractions with the same denominator and simplification
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
 arith813 Multiplication of 3 fractions
 arith818 Word problem involving fractions and multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith695 Complex fraction without variables: Problem type 1
 arith819 Word problem involving fractions and division
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing

arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith110 Decimal place value: Tenths and hundredths
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith221 Rounding decimals
arith687 Fractional position on a number line
arith092 Using a common denominator to order fractions
arith829 Reading decimal position on a number line: Tenths
arith830 Reading decimal position on a number line: Hundredths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith733 Using a calculator to convert a fraction to a rounded decimal
arith609 Ordering fractions and decimals
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith101 Estimating a sum of whole numbers
arith131 Estimating a decimal sum or difference
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith082 Multiplication of a decimal by a power of ten
arith752 Estimating a product of decimals
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith823 Writing ratios using different notations
arith663 Writing ratios for real-world situations
arith450 Identifying statements that describe a ratio
arith824 Simplifying a ratio of whole numbers: Problem type 1

arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions
 arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith686 Writing a ratio as a percentage
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit012 Time unit conversion with whole number values
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 unit034 Converting between metric and U.S. Customary unit systems

Real Numbers

alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith415 Using a number line to compare integers
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
 arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
 arith416 Comparing signed numbers relating to a real-world situation
 arith402 Plotting opposite integers on a number line

arith403 Finding opposites of integers
arith667 Plotting fractions on a number line
arith605 Plotting rational numbers on a number line
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root
arith515 Approximating the location of irrational numbers on a number line
arith712 Ordering real numbers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
alge660 Identifying equivalent signed fractions
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith821 Exponents and fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations

alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
mstat065 Converting between temperatures in Fahrenheit and Celsius
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge647 Identifying like terms
alge700 Combining like terms: Whole number coefficients
alge432 Introduction to adding fractions with variables and common denominators
alge607 Combining like terms: Integer coefficients
arith655 Introduction to properties of addition
alge187 Properties of addition
alge666 Combining like terms: Fractional coefficients
alge665 Combining like terms: Decimal coefficients
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith410 Introduction to factoring with numbers
alge605 Factoring a linear binomial
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
arith656 Introduction to properties of multiplication
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge293 Combining like terms in a quadratic expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom618 Perimeter of a polygon involving mixed numbers and fractions
geom221 Finding the missing length in a figure
geom353 Perimeter of a piecewise rectangular figure
alge615 Writing algebraic expressions for the perimeter of a figure
geom078 Sides of polygons having the same perimeter
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom869 Estimates and exact answers
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom142 Word problem involving the area between two rectangles
unit009 U.S. Customary area unit conversion with whole number values

unit010 Metric area unit conversion with decimal values

Linear Equations and Inequalities

alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge801 Additive property of equality with fractions and mixed numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers
alge836 Additive property of equality with signed fractions
alge008 Multiplicative property of equality with whole numbers
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions
alge825 Multiplicative property of equality with decimals
alge797 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge803 Using two steps to solve an equation with whole numbers
alge266 Additive property of equality with a negative coefficient
alge006 Solving a two-step equation with integers
alge815 Introduction to using substitution to solve a linear equation
alge200 Solving an equation to find the value of an expression
alge920 Introduction to solving an equation with parentheses
alge837 Solving a multi-step equation given in fractional form
alge986 Identifying properties used to solve a linear equation
alge824 Solving a two-step equation with signed decimals
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
alge208 Solving a two-step equation with signed fractions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge603 Introduction to solving an absolute value equation
alge864 Solving an absolute value equation: Problem type 1
alge865 Solving an absolute value equation: Problem type 2
alge866 Solving an absolute value equation: Problem type 3
alge867 Solving an absolute value equation: Problem type 4
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression

alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 arith504 Writing an equation to represent a proportional relationship
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge730 Writing a multi-step equation for a real-world situation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge218 Solving a word problem involving rates and time conversion
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge796 Solving a distance, rate, time problem using a linear equation
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 geom564 Finding side lengths of squares given an area and a perimeter
 geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
 geom444 Word problem on optimizing an area or perimeter
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom817 Finding a side length given the perimeter and side lengths with variables
 arith514 Converting a repeating decimal to a fraction
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge658 Introduction to solving a rational equation
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith849 Finding the total amount given the percentage of a partial amount
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith854 Computing a percent mixture
 alge795 Solving a percent mixture problem using a linear equation
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 arith915 Calculating income tax
 arith918 Comparing discounts
 arith909 Examining a savings plan for college
 arith914 Calculations involving paying for college
 arith920 Comparing total costs for attending different colleges

arith922 Distinguishing between fixed and variable expenses
 arith916 Computing percentages for categories of a budget
 arith919 Computations involving cost of living and hourly wage
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score
 arith917 Computing a person's net worth
 arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
 arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
 arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
 arith910 Calculating and comparing simple interest and compound interest
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set002 Union and intersection of finite sets
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge621 Solving a word problem using a one-step linear inequality
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Graphing, Functions, and Linear Systems

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 arith454 Making a table and plotting points given a unit rate
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x- and y-intercepts
 alge881 Graphing a line by first finding its x- and y-intercepts
 mstat007 Interpreting a line graph
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge625 Identifying linear equations: Basic
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge314 Finding the slope, y-intercept, and equation for a linear function given a table of values
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge318 Finding the slope and a point on a line given its equation in point-slope form
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge313 Writing an equation in standard form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge322 Comparing linear functions to the parent function $y=x$
 geom358 Identifying parallel and perpendicular lines
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 geom462 Identifying parallel and perpendicular lines from coordinates
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation

alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation

alge655 Writing and evaluating a function that models a real-world situation: Basic

alge897 Writing and evaluating a function that models a real-world situation: Advanced

alge654 Graphing ordered pairs and writing an equation from a table of values in context

alge656 Writing an equation and drawing its graph to model a real-world situation: Basic

alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced

alge817 Finding the initial amount and rate of change given a table for a linear function

alge818 Finding the initial amount and rate of change given a graph of a linear function

alge992 Combining functions to write a new function that models a real-world situation

alge987 Comparing properties of linear functions given in different forms

alge989 Interpreting the parameters of a linear function that models a real-world situation

alge805 Application problem with a linear function: Finding a coordinate given the slope and a point

alge806 Application problem with a linear function: Finding a coordinate given two points

alge670 Identifying independent and dependent quantities from tables and graphs

mstat052 Identifying independent and dependent variables from equations or real-world situations

alge991 Solving a linear equation by graphing

mstat094 Constructing a scatter plot

mstat030 Sketching the line of best fit

mstat023 Scatter plots and correlation

mstat068 Predictions from the line of best fit

mstat067 Approximating the equation of a line of best fit and making predictions

mstat069 Computing residuals

mstat070 Interpreting residual plots

mstat093 Classifying linear and nonlinear relationships from scatter plots

mstat071 Linear relationship and the correlation coefficient

mstat096 Identifying outliers and clustering in scatter plots

mstat074 Identifying correlation and causation

arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers

arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions

arith501 Identifying proportional relationships in graphs: Basic

arith502 Identifying proportional relationships in graphs: Advanced

arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation

alge699 Comparing proportional relationships given in different forms

alge982 Identifying direct variation equations

alge938 Identifying direct variation from ordered pairs and writing equations

alge904 Writing a direct variation equation

alge175 Word problem on direct variation

alge828 Interpreting direct variation from a graph

fun032 Identifying functions from relations

fun010 Vertical line test

fun016 Domain and range from ordered pairs

fun001 Table for a linear function

pcalc760 Evaluating functions: Linear and quadratic or cubic

fun033 Variable expressions as inputs of functions: Problem type 1

fun030 Evaluating a piecewise-defined function

alge294 Finding outputs of a one-step function that models a real-world situation: Function notation

alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation

alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation

alge990 Domain and range of a linear function that models a real-world situation

fun026 Finding an output of a function from its graph

pcalc761 Finding inputs and outputs of a function from its graph

fun007 Domain and range from the graph of a discrete relation

alge312 Finding domain and range from a linear graph in context

pcalc750 Finding intercepts of a nonlinear function given its graph

alge999 Finding where a function is increasing, decreasing, or constant given the graph

pcalc752 Finding local maxima and minima of a function given the graph

mstat018 Choosing a graph to fit a narrative: Basic

mstat051 Choosing a graph to fit a narrative: Advanced

alge896 Graphing an integer function and finding its range for a given domain

alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope

alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun031 Graphing a piecewise-defined function: Problem type 1
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph
 alge953 Translating the graph of a parabola: One step
 alge723 How the leading coefficient affects the shape of a parabola
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge185 Writing an equation for a function after a vertical translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 pcalc773 Transforming the graph of a function using more than one transformation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence
 alge732 Finding patterns in shapes
 alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
 pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
 alge317 Writing a system of linear equations given its graph
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge988 Identifying the operations used to create equivalent systems of equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations

alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
 alge316 Writing an inequality given its graph in the plane: Slanted boundary line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1

Exponents and Exponential Functions

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge689 Introduction to the quotient rule with negative exponents: Whole number base
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge691 Introduction to the power of a power rule with negative exponents: Whole number base
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot025 Estimating numbers using scientific notation

scinot020 Choosing metric units and converting to the base unit in scientific notation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
 scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
 scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
 scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
 scinot017 Estimating the sum or difference of two numbers written in scientific notation
 alge971 Table for an exponential function
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)x$
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)x$
 alge321 Finding domain and range from the graph of an exponential function
 pcalc922 Translating the graph of an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 mstat103 Choosing an exponential model and using it to make a prediction
 alge993 Comparing linear, polynomial, and exponential functions
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat047 Introduction to expectation
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 stat805 Making a reasonable inference based on proportion statistics
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat031 Interpreting a stem-and-leaf plot
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph

geom151 Measuring an angle with the protractor
geom814 Angle measure in a circle graph
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat075 Understanding the mean graphically: Two bars
mstat076 Understanding the mean graphically: Four or more bars
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
stat009 Percentiles
mstat078 Comparing measures of center and variation
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat090 Comparing sample means
mstat082 Computing mean absolute deviation from a list of numerical values
mstat083 Computing mean absolute deviation from a bar graph
mstat084 Assessing the degree of overlap of two distributions
mstat042 Interpreting a Venn diagram of 2 sets
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
stat790 Permutations, combinations, and the multiplication principle for counting
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
mstat046 Experimental and theoretical probability
stat106 Outcomes and event probability
stat112 Probabilities involving two dice
mstat116 Probabilities of a permutation and a combination
mstat048 Odds of an event
mstat019 Identifying independent events given descriptions of experiments
mstat012 Probability of independent events
mstat013 Probability of dependent events
stat117 Probabilities of draws with replacement
stat118 Probabilities of draws without replacement
mstat115 Determining outcomes for compound events and complements of events
mstat110 Using a Venn diagram to understand the multiplication rule for probability
mstat107 Outcomes and event probability: Conditional probability
mstat104 Identifying independent events given values of probabilities
mstat105 Computing conditional probability using a two-way frequency table
mstat106 Computing conditional probability to make an inference using a two-way frequency table
mstat118 Conditional probability: Basic
mstat109 Using a Venn diagram to understand the addition rule for probability
mstat108 Outcomes and event probability: Addition rule

mstat032 Probability of the union of two events
 mstat117 Probability of intersection or union: Word problems
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat114 Using a random number table to make a fair decision
 stat021 Population standard deviation
 stat852 Word problem involving calculations from a normal distribution

Segments, Lines, and Angles

geom349 Naming segments, rays, and lines
 geom459 Analyzing relationships between points, lines, and planes given a figure
 geom359 Identifying congruent shapes on a grid
 geom407 Matching basic geometric terms with their definitions
 geom392 Introduction to segment addition
 geom394 Computing distances between decimals on a number line
 geom393 Finding a point on a number line given the length of a segment and another point
 geom395 Midpoint of a number line segment: Integers
 geom396 Midpoint of a number line segment: Decimals
 geom397 Using a segment's midpoint and endpoint to locate the other endpoint
 geom521 Segment addition and midpoints
 geom399 Finding a point that partitions a number line segment in a given fractional relationship
 geom390 Finding a point that partitions a number line segment in a given ratio
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 alge533 Square root addition or subtraction with three terms
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith039 Square root multiplication: Advanced
 arith766 Simplifying a quotient of square roots
 alge527 Rationalizing a denominator: Quotient involving square roots
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom458 Identifying congruent segments in the plane
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 geom406 Finding a point that partitions a segment in the plane in a given fractional relationship
 geom391 Finding a point that partitions a segment in the plane in a given ratio
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom460 Naming angles, sides of angles, and vertices
 geom039 Finding supplementary and complementary angles
 geom454 Introduction to angle addition
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom800 Identifying linear pairs and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom500 Solving equations involving vertical angles and linear pairs
 geom001 Finding an angle measure of a triangle given two angles
 geom389 Constructing congruent line segments
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom154 Constructing the perpendicular bisector of a line segment
 geom457 Making conjectures given a geometric construction

glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic011 Writing the converse, inverse, and contrapositive of a conditional statement and determining their truth values
 glogic012 Writing a biconditional statement as a conditional statement and its converse and determining truth values
 glogic013 Finding counterexamples to conjectures
 glogic008 Conditional statements and deductive reasoning
 geom665 Distinguishing between undefined terms, definitions, postulates, conjectures, and theorems
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom611 Proofs involving angle congruence
 geom304 Identifying corresponding and alternate angles
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom503 Solving equations involving angles and two pairs of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines

Triangles, Quadrilaterals, and Polygons

geom306 Acute, obtuse, and right triangles
 geom626 Classifying scalene, isosceles, and equilateral triangles by side lengths
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom322 Identifying coordinates that give right triangles
 geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom628 Finding angle measures of a triangle given angles with variables
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom519 Identifying and naming congruent parts of congruent triangles
 geom357 Identifying transformations
 geom325 Determining if figures are related by rigid motions
 geom327 Examining triangle congruence in terms of rigid motion
 geom329 Exploring the triangle congruence theorems
 geom418 Completing proofs involving congruent triangles using SSS or SAS
 geom420 Introduction to proving triangles congruent using SSS or SAS
 geom520 Identifying and naming congruent triangles
 geom419 Completing proofs involving congruent triangles using ASA or AAS
 geom421 Introduction to proving triangles congruent using ASA or AAS
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom647 Separating overlapping triangles and identifying common features
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom423 Proofs involving congruent triangles with parallel or perpendicular segments
 geom424 Determining when to apply the HL congruence property
 geom425 Introduction to proving triangles congruent using the HL property
 geom422 Introduction to proofs involving congruent triangles and CPCTC
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom645 Finding side lengths and angle measures of isosceles and equilateral triangles
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom629 Finding angle measures of an isosceles triangle given angles with variables
 geom363 Proofs of theorems involving isosceles triangles
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem

alge675 Using the Pythagorean Theorem to find distance on a grid
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom449 Classifying segments inside triangles
 geom446 Using the circumcenter of a triangle to find segment lengths
 geom447 Using the incenter of a triangle to find segment lengths and angle measures
 geom448 Using the centroid of a triangle to find segment lengths
 geom413 Introduction to the triangle midsegment theorem
 geom324 Proving the triangle midsegment theorem in the coordinate plane
 geom441 Proof involving points on the perpendicular bisector of a line segment
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom664 Using triangle inequality to determine possible lengths of a third side
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom543 Drawing a circle with a given radius or diameter
 geom545 Drawing triangles with given side lengths using a compass
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom451 Using the hinge theorem
 geom650 Indirect proof (proof by contradiction)
 geom361 Naming polygons
 geom870 Sum of the angle measures of a quadrilateral
 geom656 Finding the sum of the interior angle measures of a convex polygon given the number of sides
 geom655 Finding the number of sides of a convex polygon given the sum of the measures of the interior angles
 geom657 Finding a missing interior angle measure in a convex polygon
 geom658 Finding the measures of an interior angle and an exterior angle of a regular polygon
 geom659 Finding the number of sides of a regular polygon given the measure of an interior angle
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom436 Finding angle measures involving diagonals of a rhombus
 geom523 Conditions for quadrilaterals
 geom661 Completing proofs of theorems involving sides of a parallelogram
 geom662 Completing proofs of theorems involving angles of a parallelogram
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom818 Finding the coordinates of a point to make a parallelogram
 geom819 Finding coordinates of vertices of polygons
 geom321 Proving that a quadrilateral with given vertices is a parallelogram
 geom408 Classifying parallelograms in the coordinate plane
 geom863 Congruence in the coordinate plane

Similarity and Transformations

geom360 Identifying similar or congruent shapes on a grid
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom475 Triangles and angle bisectors

geom326 Determining if figures are related by similarity transformations
geom328 Examining triangle similarity in terms of similarity transformations
geom364 Identifying and naming similar triangles
geom365 Proofs involving similar triangles
geom472 Completing proofs involving the triangle proportionality theorem
geom461 Proving the slope criterion for parallel or perpendicular lines
geom538 Finding lengths using scale models
geom539 Finding a scale factor: Same units
geom541 Using a scale drawing to find actual area
geom542 Reproducing a scale drawing at a different scale
geom452 Identifying similar right triangles that overlap
alge814 Using right triangles to find the slope of a line
geom507 Right triangles and geometric mean
geom473 Proving the Pythagorean Theorem using similar triangles
geom860 Special right triangles: Decimal answers
geom506 Special right triangles: Exact answers
geom596 Translating a point and giving its coordinates: One step
geom909 Translating a point and giving its coordinates: Two steps
geom597 Properties of translated figures
geom598 Determining if figures are related by a translation
geom330 Translating a polygon
geom331 Using a translated point to find coordinates of other translated points
geom375 Understanding the definition of a translation
arith408 Reflecting a point across an axis
geom533 Reflecting a point across both coordinate axes
geom590 Reflecting a point across an axis and giving its coordinates
arith407 Finding the coordinates of a point reflected across an axis
geom560 Finding the coordinates of a point reflected across both axes
geom534 Reflecting a polygon across the x-axis or y-axis
geom591 Properties of reflected figures
geom592 Determining if figures are related by a reflection
geom332 Reflecting a polygon over a vertical or horizontal line
geom333 Finding the coordinates of three points reflected over an axis
geom602 Finding the coordinates of a point reflected across an axis and translated
geom376 Understanding the definition of a reflection
geom593 Rotating a point and giving its coordinates
geom594 Properties of rotated figures
geom595 Determining if figures are related by a rotation
geom335 Rotating a figure about the origin
geom377 Understanding the definition of a rotation
geom334 Drawing lines of symmetry
geom815 Finding an angle of rotation
geom624 Identifying rotational symmetry and angles of rotation
geom831 Rotational and point symmetries
geom369 Writing a rule to describe a translation
geom370 Writing a rule to describe a reflection
geom371 Writing a rule to describe a rotation
geom373 Identifying transformations that map a quadrilateral onto itself
geom374 Identifying transformations that map a regular polygon onto itself
geom580 Determining if figures are congruent and related by a transformation
geom581 Determining if figures are congruent and related by a sequence of transformations
geom606 Dilating a segment and giving the coordinates of its endpoints
geom607 The effect of dilation on side length
geom608 Determining if figures are related by a dilation
geom636 The effect of dilation on area
geom336 Dilating a figure
geom372 Writing a rule to describe a dilation
geom582 Determining if figures are similar and related by a sequence of transformations
geom463 Exploring similarity of circles
geom379 Exploring the effect of dilation on lines

Area, Volume, and Circles

geom022 Area of a parallelogram
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom430 Word problem on population density
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom426 Finding the perimeter of a triangle, trapezoid, or parallelogram in the coordinate plane
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane
 geom440 Finding the area of a right triangle using the Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom023 Area of a trapezoid
 geom434 Area of a rhombus
 geom435 Finding the area of a rhombus using the Pythagorean Theorem
 geom438 Finding the area of a trapezoid, rhombus, or kite in the coordinate plane
 geom213 Area of a regular polygon
 geom479 Finding the area of a regular polygon using special right triangles
 geom481 Side lengths, perimeters, and areas of similar polygons
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom427 Informal argument for the formula of the circumference of a circle
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom477 Circumference and area of a circle: Exact answers in terms of pi
 geom570 Distinguishing between the area and circumference of a circle
 geom428 Informal argument for the formula of the area of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom649 Area involving multiple inscribed figures
 geom212 Circles inscribed in and circumscribed about regular polygons
 geom126 Area of a sector of a circle: Exact answer in terms of pi
 geom429 Informal argument for the formula of the area of a sector
 mstat011 Area as probability
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom381 Identifying solids generated by rotations of two-dimensional regions
 geom443 Identifying geometric shapes that model real-world objects
 geom491 Identifying properties of Euclidean and spherical geometries
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi

geom578 Word problem involving the surface area of a cylinder
geom484 Word problem involving the surface area of rectangular prisms and cylinders
geom483 Word problem involving the surface area of rectangular prisms and pyramids
geom354 Volume of a rectangular prism made of unit cubes
geom311 Volume of a rectangular prism
geom555 Distinguishing between surface area and volume
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
geom865 Measuring the net of a solid to find surface area or volume
geom382 Volume of an oblique rectangular prism
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom386 Computations involving density, mass, and volume
geom387 Word problem involving the volume of a rectangular solid
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom035 Volume of a cylinder
geom385 Informal argument for the formula of the volume of a cylinder
geom383 Volume of an oblique cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom388 Word problem on density involving the volume of a cylindrical solid
geom384 Using cross sections to identify solids with the same volume
geom133 Ratio of volumes
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom842 Surface area of a sphere
geom841 Volume of a sphere
geom574 Word problem involving the volume of a sphere
geom488 Identifying similar solids
geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
geom489 Computing side length, surface area, and volume for similar solids
geom654 Informal argument for the formula of the volume of a cone
geom490 Word problem involving volumes of similar solids
geom464 Identifying chords, secants, and tangents of a circle
geom848 Tangents of a circle: Problem type 1
geom849 Tangents of a circle: Problem type 2
geom470 Constructing a tangent of a circle
geom465 Naming and finding measures of central angles, inscribed angles, and arcs of a circle
geom467 Applying properties of radii, diameters, and chords
geom466 Arc length
geom805 Arc length and area of a sector of a circle
geom653 Computing ratios of arc lengths to radii and describing the result
pcalc002 Converting between degree and radian measure: Problem type 1
geom468 Central angles and inscribed angles of a circle
geom469 Central angles and angles involving chords and tangents of a circle
geom666 Inscribed angles in relation to a diameter or a polygon inscribed in a circle
geom667 Inscribed angles and angles involving chords and tangents of a circle
geom492 Establishing facts about a quadrilateral inscribed in a circle
geom312 Inscribing an equilateral triangle or a regular hexagon in a circle
geom313 Inscribing a square in a circle
geom314 Inscribing a circle in a triangle
geom315 Circumscribing a circle about a triangle
geom567 Angles of intersecting secants and tangents
geom568 Lengths of chords, secants, and tangents

Polynomials and Quadratic Functions

alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge932 Simplifying a sum or difference of multivariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge081 Multiplying conjugate binomials: Multivariate
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
alge973 Multiplying binomials with negative coefficients
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge763 Polynomial long division: Problem type 3
alge985 Closure properties of integers and polynomials
alge736 Introduction to the GCF of two monomials
alge930 Greatest common factor of three univariate monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
alge923 Factoring a univariate polynomial by grouping: Problem type 1
alge950 Factoring a univariate polynomial by grouping: Problem type 2
alge951 Factoring a multivariate polynomial by grouping: Problem type 1
alge952 Factoring a multivariate polynomial by grouping: Problem type 2
alge039 Factoring a quadratic with leading coefficient 1
alge942 Factoring a quadratic in two variables with leading coefficient 1
alge936 Factoring out a constant before factoring a quadratic
alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
alge978 Factoring a quadratic by the ac-method
alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
alge937 Factoring a quadratic with a negative leading coefficient
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
alge946 Factoring a perfect square trinomial in two variables
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge839 Factoring a difference of squares in two variables
alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
alge041 Factoring a product of a quadratic trinomial and a monomial
alge042 Factoring with repeated use of the difference of squares formula
alge044 Factoring a sum or difference of two cubes
alge681 Solving an equation written in factored form
alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
alge045 Finding the roots of a quadratic equation with leading coefficient 1

alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge323 Finding the zeros of a quadratic function given its equation
 alge163 Writing a quadratic equation given the roots and the leading coefficient
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge320 Writing a quadratic function given its zeros
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc714 Using a graphing calculator to find the zeros of a quadratic function
 pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 alge319 Rewriting a quadratic function in standard form
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 geom494 Deriving the equation of a parabola given its focus and directrix
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 fun019 Sum, difference, and product of two functions
 alge716 Introduction to the composition of two functions
 fun022 Composition of two functions: Basic
 fun011 Horizontal line test
 fun012 Inverse functions: Linear, discrete
 pcalc114 Even and odd functions: Problem type 1

Radicals, Trigonometry, and Rational Expressions

alge413 Finding all square roots of a number
arith602 Estimating a square root
alge567 Using numerical methods to approximate a square root to the nearest tenth
alge568 Using numerical methods to approximate a square root to the nearest hundredth
arith761 Square roots of integers raised to even exponents
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
alge537 Using absolute value to simplify square roots of perfect square monomials
arith094 Cube root of an integer
alge549 Finding nth roots of perfect nth powers with signs
arith768 Finding the nth root of a perfect nth power fraction
alge550 Finding the nth root of a perfect nth power monomial
alge539 Table for a square root function
alge565 Domain of a square root function: Basic
alge566 Domain of a square root function: Advanced
alge543 Graphing a square root function: Problem type 1
alge544 Graphing a square root function: Problem type 2
alge545 Graphing a square root function: Problem type 3
alge812 Converting between radical form and exponent form
alge560 Rational exponents: Unit fraction exponents and whole number bases
alge561 Rational exponents: Unit fraction exponents and bases involving signs
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge251 Rational exponents: Negative exponents and fractional bases
alge558 Rational exponents: Product rule
alge559 Rational exponents: Quotient rule
alge773 Rational exponents: Products and quotients with negative exponents
alge562 Rational exponents: Power of a power rule
alge249 Rational exponents: Powers of powers with negative exponents
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
alge275 Simplifying a radical expression with two variables
alge273 Simplifying a higher root of a whole number
alge551 Introduction to simplifying a higher radical expression
alge552 Simplifying a higher radical expression: Univariate
alge811 Simplifying a higher radical expression: Multivariate
alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
alge532 Simplifying a sum or difference of radical expressions: Univariate
alge084 Simplifying a sum or difference of radical expressions: Multivariate
alge522 Introduction to simplifying a product of radical expressions: Univariate
alge523 Simplifying a product of radical expressions: Univariate
alge640 Simplifying a product of radical expressions: Multivariate
alge556 Introduction to simplifying a product of higher roots
alge557 Simplifying a product of higher radical expressions
alge525 Introduction to simplifying a product involving square roots using the distributive property
alge526 Simplifying a product involving square roots using the distributive property: Basic
alge276 Simplifying a product involving square roots using the distributive property: Advanced
alge774 Special products of radical expressions: Conjugates and squaring
alge984 Classifying sums and products as rational or irrational
alge530 Simplifying a quotient involving a sum or difference with a square root
alge528 Rationalizing a denominator: Square root of a fraction
alge529 Rationalizing a denominator: Quotient involving a monomial
alge534 Rationalizing a denominator using conjugates: Integer numerator
alge535 Rationalizing a denominator using conjugates: Square root in numerator
alge400 Introduction to solving a radical equation
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
alge411 Solving a radical equation with a quadratic expression under the radical
alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$

alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced
 alge698 Solving an equation of the form $x^3 = a$ using integers
 geom565 Finding the side length of a cube given its volume
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom409 Proving the law of cosines
 geom439 Using trigonometry to find the area of a right triangle
 pcalc646 Finding the area of a triangle using trigonometry
 geom319 Expressing the area of a triangle in terms of the sine of one of its angles
 pcalc647 Heron's formula
 pcalc060 Magnitude of a vector given in component form
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 pcalc063 Translation of a vector
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph
 alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 pcalc682 Evaluating functions: Absolute value, rational, radical
 alge715 Domain of a rational function: Excluded values
 alge454 Simplifying a ratio of factored polynomials: Linear factors
 alge455 Simplifying a ratio of factored polynomials: Factors with exponents
 alge456 Simplifying a ratio of polynomials using GCF factoring
 alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
 alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge459 Simplifying a ratio of polynomials: Problem type 3
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge460 Multiplying rational expressions made up of linear expressions
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
 alge462 Multiplying rational expressions involving multivariate quadratics
 alge054 Dividing rational expressions involving multivariate monomials
 alge463 Dividing rational expressions involving linear expressions
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1

alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
alge465 Dividing rational expressions involving multivariate quadratics
alge466 Multiplication and division of 3 rational expressions
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
alge428 Finding the LCD of rational expressions with linear denominators: Common factors
alge429 Finding the LCD of rational expressions with quadratic denominators
alge430 Writing equivalent rational expressions with monomial denominators
alge431 Writing equivalent rational expressions with polynomial denominators
alge304 Writing equivalent rational expressions involving opposite factors
alge433 Adding rational expressions with common denominators and monomial numerators
alge056 Adding rational expressions with common denominators and binomial numerators
alge434 Adding rational expressions with common denominators and GCF factoring
alge435 Adding rational expressions with common denominators and quadratic factoring
alge436 Adding rational expressions with different denominators and a single occurrence of a variable
alge437 Adding rational expressions with denominators ax and bx : Basic
alge438 Adding rational expressions with denominators ax and bx : Advanced
alge439 Adding rational expressions with denominators axn and bxm
alge440 Adding rational expressions with multivariate monomial denominators: Basic
alge226 Adding rational expressions with multivariate monomial denominators: Advanced
alge441 Adding rational expressions with linear denominators without common factors: Basic
alge442 Adding rational expressions with linear denominators without common factors: Advanced
alge443 Adding rational expressions with linear denominators with common factors: Basic
alge444 Adding rational expressions with linear denominators with common factors: Advanced
alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
alge661 Adding rational expressions involving different quadratic denominators
alge446 Adding 3 rational expressions with different quadratic denominators
arith696 Complex fraction without variables: Problem type 2
alge470 Complex fraction involving univariate monomials
alge058 Complex fraction involving multivariate monomials
alge471 Complex fraction: GCF factoring
alge472 Complex fraction: Quadratic factoring
alge473 Complex fraction made of sums involving rational expressions: Problem type 1
alge474 Complex fraction made of sums involving rational expressions: Problem type 2
alge475 Complex fraction made of sums involving rational expressions: Problem type 3
alge476 Complex fraction made of sums involving rational expressions: Problem type 4
alge477 Complex fraction made of sums involving rational expressions: Problem type 5
alge478 Complex fraction made of sums involving rational expressions: Problem type 6
alge479 Complex fraction made of sums involving rational expressions: Multivariate
alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
alge425 Solving a rational equation that simplifies to quadratic: Denominator x
alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
arith612 Word problem involving multiple rates
alge770 Solving a work problem using a rational equation
alge450 Solving a distance, rate, time problem using a rational equation
alge059 Ordering fractions with variables
alge905 Writing an inverse variation equation
alge903 Identifying direct and inverse variation equations
alge902 Identifying direct and inverse variation from ordered pairs and writing equations

alge176 Word problem on inverse variation
alge220 Word problem on inverse proportions
pcalc681 Writing an equation that models variation
alge772 Word problem on combined variation
pcalc917 Finding the asymptotes of a rational function: Constant over linear
pcalc918 Finding the asymptotes of a rational function: Linear over linear
alge515 Graphing a rational function: Constant over linear
alge516 Graphing a rational function: Linear over linear

B.38 Integrated Mathematics II

Real Numbers

arith067 Simplifying a fraction
arith212 Equivalent fractions
arith711 Division involving zero
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith813 Multiplication of 3 fractions
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith695 Complex fraction without variables: Problem type 1
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith733 Using a calculator to convert a fraction to a rounded decimal
arith624 Addition of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith830 Reading decimal position on a number line: Hundredths
alge286 Plotting integers on a number line
arith403 Finding opposites of integers
arith605 Plotting rational numbers on a number line
arith092 Using a common denominator to order fractions

arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith691 Ordering integers
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root
arith515 Approximating the location of irrational numbers on a number line
arith712 Ordering real numbers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith233 Introduction to exponents
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith821 Exponents and fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3
arith753 Squaring decimal bases: Products greater than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
mstat065 Converting between temperatures in Fahrenheit and Celsius
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction

alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge700 Combining like terms: Whole number coefficients
alge432 Introduction to adding fractions with variables and common denominators
alge607 Combining like terms: Integer coefficients
alge187 Properties of addition
alge666 Combining like terms: Fractional coefficients
alge665 Combining like terms: Decimal coefficients
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
arith056 Factors
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge293 Combining like terms in a quadratic expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom618 Perimeter of a polygon involving mixed numbers and fractions
geom221 Finding the missing length in a figure
geom353 Perimeter of a piecewise rectangular figure
alge615 Writing algebraic expressions for the perimeter of a figure
geom078 Sides of polygons having the same perimeter
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom869 Estimates and exact answers
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom142 Word problem involving the area between two rectangles
geom311 Volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
mstat033 Measuring length to the nearest inch
mstat034 Measuring length to the nearest quarter or half inch
unit005 U.S. Customary unit conversion with whole number values
mstat035 Conversions involving measurements in feet and inches
mstat036 Adding measurements in feet and inches
unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
mstat063 Measuring length to the nearest centimeter
mstat064 Measuring length to the nearest millimeter
unit001 Metric distance conversion with whole number values
unit002 Metric mass or capacity conversion with whole number values
unit003 Metric distance conversion with decimal values
unit004 Metric conversion with decimal values: Two-step problem
unit012 Time unit conversion with whole number values
unit034 Converting between metric and U.S. Customary unit systems
unit009 U.S. Customary area unit conversion with whole number values
unit010 Metric area unit conversion with decimal values
arith823 Writing ratios using different notations
arith663 Writing ratios for real-world situations
arith450 Identifying statements that describe a ratio

arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 arith825 Simplifying a ratio of decimals
 arith064 Solving a word problem on proportions using a unit rate
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio

Linear Equations and Inequalities

alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge815 Introduction to using substitution to solve a linear equation
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2

alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 arith504 Writing an equation to represent a proportional relationship
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge730 Writing a multi-step equation for a real-world situation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge218 Solving a word problem involving rates and time conversion
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge796 Solving a distance, rate, time problem using a linear equation
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 geom564 Finding side lengths of squares given an area and a perimeter
 geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
 geom444 Word problem on optimizing an area or perimeter
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom817 Finding a side length given the perimeter and side lengths with variables
 arith514 Converting a repeating decimal to a fraction
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge658 Introduction to solving a rational equation
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith834 Converting between percentages and decimals
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith686 Writing a ratio as a percentage
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease

arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith854 Computing a percent mixture
 alge795 Solving a percent mixture problem using a linear equation
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 alge015 Translating a sentence by using an inequality symbol
 alge653 Introduction to identifying solutions to an inequality
 alge845 Translating a sentence into a one-step inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set004 Set builder and interval notation
 set002 Union and intersection of finite sets
 set005 Union and intersection of intervals
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge747 Solving a compound linear inequality: Interval notation
 alge621 Solving a word problem using a one-step linear inequality
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Graphing, Functions, and Systems

alge064 Reading a point in the coordinate plane

alge067 Plotting a point in the coordinate plane
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 mstat007 Interpreting a line graph
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y -intercept
 alge196 Graphing a line through a given point with a given slope
 alge625 Identifying linear equations: Basic
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y -intercept
 alge258 Writing an equation of a line given its slope and y -intercept
 alge892 Writing an equation and graphing a line given its slope and y -intercept
 alge314 Finding the slope, y -intercept, and equation for a linear function given a table of values
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge318 Finding the slope and a point on a line given its equation in point-slope form
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge313 Writing an equation in standard form given the slope and a point
 alge070 Writing an equation of a line given the y -intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge322 Comparing linear functions to the parent function $y = x$
 geom358 Identifying parallel and perpendicular lines
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 geom462 Identifying parallel and perpendicular lines from coordinates
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation

alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge991 Solving a linear equation by graphing
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat074 Identifying correlation and causation
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun030 Evaluating a piecewise-defined function
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function
 pcalc750 Finding intercepts of a nonlinear function given its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge572 Graphing a function of the form $f(x) = ax^2 + bx + c$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 fun031 Graphing a piecewise-defined function: Problem type 1

alge997 Finding the average rate of change of a function given its equation
alge998 Finding the average rate of change of a function given its graph
alge953 Translating the graph of a parabola: One step
alge723 How the leading coefficient affects the shape of a parabola
alge898 Translating the graph of an absolute value function: One step
alge899 Translating the graph of an absolute value function: Two steps
alge901 How the leading coefficient affects the graph of an absolute value function
alge185 Writing an equation for a function after a vertical translation
pcalc769 Translating the graph of a function: One step
pcalc770 Translating the graph of a function: Two steps
pcalc771 Transforming the graph of a function by reflecting over an axis
pcalc772 Transforming the graph of a function by shrinking or stretching
pcalc773 Transforming the graph of a function using more than one transformation
fun020 Writing an equation for a function after a vertical and horizontal translation
alge914 Identifying solutions to a system of linear equations
alge075 Classifying systems of linear equations from graphs
alge725 Graphically solving a system of linear equations
pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
alge317 Writing a system of linear equations given its graph
alge816 Solving a system of linear equations of the form $y = mx + b$
alge751 Solving a system of linear equations using substitution
alge915 Solving a system of linear equations using elimination with addition
alge076 Solving a system of linear equations using elimination with multiplication and addition
alge916 Solving a system of linear equations with fractional coefficients
alge917 Solving a system of linear equations with decimal coefficients
alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
alge077 Creating an inconsistent system of linear equations
alge988 Identifying the operations used to create equivalent systems of equations
alge753 Solving a 3x3 system of linear equations: Problem type 1
alge263 Interpreting the graphs of two functions
alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
alge184 Solving a value mixture problem using a system of linear equations
alge192 Solving a percent mixture problem using a system of linear equations
alge224 Solving a distance, rate, time problem using a system of linear equations
alge172 Solving a tax rate or interest rate problem using a system of linear equations
alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
alge912 Identifying solutions to a linear inequality in two variables
alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
alge720 Graphing a linear inequality in the plane: Slope-intercept form
alge018 Graphing a linear inequality in the plane: Standard form
alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
alge316 Writing an inequality given its graph in the plane: Slanted boundary line
alge079 Graphing a system of two linear inequalities: Basic
alge921 Graphing a system of two linear inequalities: Advanced
alge922 Graphing a system of three linear inequalities
alge729 Writing a multi-step inequality for a real-world situation
pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
pcalc095 Linear programming
pcalc094 Solving a word problem using linear programming
pcalc037 Scalar multiplication of a matrix
pcalc038 Addition or subtraction of matrices
pcalc740 Linear combination of matrices
pcalc039 Multiplication of matrices: Basic
pcalc710 Multiplication of matrices: Advanced
pcalc712 Gauss-Jordan elimination with a 2x2 matrix
pcalc046 Solving a system of linear equations given its augmented matrix
pcalc040 Finding the inverse of a 2x2 matrix
pcalc041 Finding the inverse of a 3x3 matrix
pcalc042 Finding the determinant of a 2x2 matrix

pcalc711 Using the inverse of a matrix to solve a 3x3 system of linear equations
 pcalc043 Finding the determinant of a 3x3 matrix
 pcalc045 Using Cramer's rule to solve a 2x2 system of linear equations
 pcalc047 Using Cramer's rule to solve a 3x3 system of linear equations

Exponents and Polynomials

alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1

alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge081 Multiplying conjugate binomials: Multivariate
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
alge973 Multiplying binomials with negative coefficients
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge763 Polynomial long division: Problem type 3
pcalc117 Synthetic division
alge985 Closure properties of integers and polynomials
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
alge605 Factoring a linear binomial
alge736 Introduction to the GCF of two monomials
alge930 Greatest common factor of three univariate monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
alge923 Factoring a univariate polynomial by grouping: Problem type 1
alge950 Factoring a univariate polynomial by grouping: Problem type 2
alge951 Factoring a multivariate polynomial by grouping: Problem type 1
alge952 Factoring a multivariate polynomial by grouping: Problem type 2
alge039 Factoring a quadratic with leading coefficient 1
alge942 Factoring a quadratic in two variables with leading coefficient 1
alge936 Factoring out a constant before factoring a quadratic
alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
alge978 Factoring a quadratic by the ac-method
alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
alge937 Factoring a quadratic with a negative leading coefficient
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
alge946 Factoring a perfect square trinomial in two variables
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge839 Factoring a difference of squares in two variables
alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
alge041 Factoring a product of a quadratic trinomial and a monomial
alge042 Factoring with repeated use of the difference of squares formula
alge044 Factoring a sum or difference of two cubes
alge681 Solving an equation written in factored form
alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge046 Roots of a product of polynomials
alge323 Finding the zeros of a quadratic function given its equation
alge163 Writing a quadratic equation given the roots and the leading coefficient
alge703 Solving a word problem using a quadratic equation with rational roots

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 alge715 Domain of a rational function: Excluded values
 alge454 Simplifying a ratio of factored polynomials: Linear factors
 alge455 Simplifying a ratio of factored polynomials: Factors with exponents
 alge456 Simplifying a ratio of polynomials using GCF factoring
 alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
 alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge459 Simplifying a ratio of polynomials: Problem type 3
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge460 Multiplying rational expressions made up of linear expressions
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
 alge462 Multiplying rational expressions involving multivariate quadratics
 alge054 Dividing rational expressions involving multivariate monomials
 alge463 Dividing rational expressions involving linear expressions
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
 alge465 Dividing rational expressions involving multivariate quadratics
 alge466 Multiplication and division of 3 rational expressions
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
 alge428 Finding the LCD of rational expressions with linear denominators: Common factors
 alge429 Finding the LCD of rational expressions with quadratic denominators
 alge430 Writing equivalent rational expressions with monomial denominators
 alge431 Writing equivalent rational expressions with polynomial denominators
 alge304 Writing equivalent rational expressions involving opposite factors
 alge433 Adding rational expressions with common denominators and monomial numerators
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge434 Adding rational expressions with common denominators and GCF factoring
 alge435 Adding rational expressions with common denominators and quadratic factoring
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge437 Adding rational expressions with denominators ax and bx : Basic
 alge438 Adding rational expressions with denominators ax and bx : Advanced
 alge439 Adding rational expressions with denominators axn and bxm
 alge440 Adding rational expressions with multivariate monomial denominators: Basic
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge441 Adding rational expressions with linear denominators without common factors: Basic
 alge442 Adding rational expressions with linear denominators without common factors: Advanced
 alge443 Adding rational expressions with linear denominators with common factors: Basic
 alge444 Adding rational expressions with linear denominators with common factors: Advanced
 alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
 alge661 Adding rational expressions involving different quadratic denominators
 alge446 Adding 3 rational expressions with different quadratic denominators
 arith696 Complex fraction without variables: Problem type 2
 alge470 Complex fraction involving univariate monomials
 alge058 Complex fraction involving multivariate monomials
 alge471 Complex fraction: GCF factoring
 alge472 Complex fraction: Quadratic factoring
 alge473 Complex fraction made of sums involving rational expressions: Problem type 1
 alge474 Complex fraction made of sums involving rational expressions: Problem type 2
 alge475 Complex fraction made of sums involving rational expressions: Problem type 3
 alge476 Complex fraction made of sums involving rational expressions: Problem type 4
 alge477 Complex fraction made of sums involving rational expressions: Problem type 5

alge478 Complex fraction made of sums involving rational expressions: Problem type 6
 alge479 Complex fraction made of sums involving rational expressions: Multivariate
 alge480 Complex fraction with negative exponents: Problem type 1
 alge481 Complex fraction with negative exponents: Problem type 2
 alge162 Complex fraction that contains a complex fraction
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
 alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
 alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
 alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
 alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge450 Solving a distance, rate, time problem using a rational equation
 alge059 Ordering fractions with variables
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation
 pcalc917 Finding the asymptotes of a rational function: Constant over linear
 pcalc918 Finding the asymptotes of a rational function: Linear over linear
 pcalc790 Finding horizontal and vertical asymptotes of a rational function: Quadratic numerator or denominator
 alge515 Graphing a rational function: Constant over linear
 alge516 Graphing a rational function: Linear over linear
 pcalc109 Graphing a rational function: Quadratic over linear
 pcalc792 Graphing rational functions with holes
 pcalc791 Matching graphs with rational functions: Two vertical asymptotes
 alge784 Solving a quadratic inequality written in factored form
 alge771 Solving a quadratic inequality
 alge783 Solving a rational inequality: Problem type 1
 pcalc677 Solving a rational inequality: Problem type 2

Radicals

alge413 Finding all square roots of a number
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith761 Square roots of integers raised to even exponents
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 alge537 Using absolute value to simplify square roots of perfect square monomials
 arith094 Cube root of an integer

alge549 Finding n th roots of perfect n th powers with signs
arith768 Finding the n th root of a perfect n th power fraction
alge550 Finding the n th root of a perfect n th power monomial
alge538 Using absolute value to simplify higher radical expressions
alge539 Table for a square root function
alge546 Evaluating a cube root function
alge565 Domain of a square root function: Basic
alge566 Domain of a square root function: Advanced
alge547 Domains of higher root functions
alge543 Graphing a square root function: Problem type 1
alge544 Graphing a square root function: Problem type 2
alge545 Graphing a square root function: Problem type 3
alge548 Graphing a cube root function
alge812 Converting between radical form and exponent form
alge560 Rational exponents: Unit fraction exponents and whole number bases
alge561 Rational exponents: Unit fraction exponents and bases involving signs
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge251 Rational exponents: Negative exponents and fractional bases
alge558 Rational exponents: Product rule
alge559 Rational exponents: Quotient rule
alge773 Rational exponents: Products and quotients with negative exponents
alge562 Rational exponents: Power of a power rule
alge249 Rational exponents: Powers of powers with negative exponents
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
pcalc682 Evaluating functions: Absolute value, rational, radical
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
alge275 Simplifying a radical expression with two variables
alge273 Simplifying a higher root of a whole number
alge551 Introduction to simplifying a higher radical expression
alge552 Simplifying a higher radical expression: Univariate
alge811 Simplifying a higher radical expression: Multivariate
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
alge533 Square root addition or subtraction with three terms
alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
alge532 Simplifying a sum or difference of radical expressions: Univariate
alge084 Simplifying a sum or difference of radical expressions: Multivariate
alge554 Simplifying a sum or difference of higher roots
alge555 Simplifying a sum or difference of higher radical expressions
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
arith039 Square root multiplication: Advanced
alge522 Introduction to simplifying a product of radical expressions: Univariate
alge523 Simplifying a product of radical expressions: Univariate
alge640 Simplifying a product of radical expressions: Multivariate
alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
alge556 Introduction to simplifying a product of higher roots
alge557 Simplifying a product of higher radical expressions
alge525 Introduction to simplifying a product involving square roots using the distributive property
alge526 Simplifying a product involving square roots using the distributive property: Basic
alge276 Simplifying a product involving square roots using the distributive property: Advanced
alge774 Special products of radical expressions: Conjugates and squaring
alge984 Classifying sums and products as rational or irrational
arith766 Simplifying a quotient of square roots
alge530 Simplifying a quotient involving a sum or difference with a square root
alge527 Rationalizing a denominator: Quotient involving square roots
alge528 Rationalizing a denominator: Square root of a fraction
alge529 Rationalizing a denominator: Quotient involving a monomial
alge534 Rationalizing a denominator using conjugates: Integer numerator

alge535 Rationalizing a denominator using conjugates: Square root in numerator
 alge536 Rationalizing a denominator using conjugates: Variable in denominator
 alge564 Rationalizing a denominator: Quotient involving a higher radical
 alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
 alge563 Simplifying products or quotients of higher radicals with different indices: Univariate
 alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
 alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
 alge411 Solving a radical equation with a quadratic expression under the radical
 alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced
 alge410 Solving an equation with a root index greater than 2: Problem type 1
 alge417 Solving an equation with a root index greater than 2: Problem type 2
 alge698 Solving an equation of the form $x^3 = a$ using integers
 geom565 Finding the side length of a cube given its volume
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge228 Solving an equation using the odd-root property: Problem type 2
 alge416 Solving an equation with exponent $1/a$: Problem type 1
 alge418 Solving an equation with exponent $1/a$: Problem type 2
 alge778 Using i to rewrite square roots of negative numbers
 alge779 Simplifying a product and quotient involving square roots of negative numbers
 pcalc048 Adding or subtracting complex numbers
 pcalc049 Multiplying complex numbers
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alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 pcalc051 Solving a quadratic equation with complex roots
 alge214 Discriminant of a quadratic equation
 alge193 Discriminant of a quadratic equation with parameter
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge782 Solving an equation that can be written in quadratic form: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 alge974 Finding the vertex, x -intercepts, and axis of symmetry from the graph of a parabola
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge320 Writing a quadratic function given its zeros
 alge277 Finding the x -intercept(s) and the vertex of a parabola
 pcalc714 Using a graphing calculator to find the zeros of a quadratic function

pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 alge319 Rewriting a quadratic function in standard form
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 fun019 Sum, difference, and product of two functions
 alge786 Quotient of two functions: Basic
 alge716 Introduction to the composition of two functions
 fun022 Composition of two functions: Basic
 pcalc776 Expressing a function as a composition of two functions
 fun021 Composition of two functions: Domain and range
 alge129 Composition of two functions: Advanced
 pcalc924 Determining whether an equation defines a function: Basic
 pcalc757 Determining whether an equation defines a function: Advanced
 fun011 Horizontal line test
 pcalc777 Determining whether two functions are inverses of each other
 fun012 Inverse functions: Linear, discrete
 alge130 Inverse functions: Rational
 pcalc778 Inverse functions: Quadratic, cubic, radical
 alge971 Table for an exponential function
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 alge321 Finding domain and range from the graph of an exponential function
 pcalc922 Translating the graph of an exponential function
 pcalc797 The graph, domain, and range of an exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^{x-b} + c$
 alge830 Evaluating an exponential function that models a real-world situation
 pcalc919 Evaluating an exponential function with base e that models a real-world situation
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 mstat103 Choosing an exponential model and using it to make a prediction
 alge993 Comparing linear, polynomial, and exponential functions
 pcalc114 Even and odd functions: Problem type 1
 pcalc764 Finding zeros of a polynomial function written in factored form
 pcalc766 Finding a polynomial of a given degree with given zeros: Real zeros
 pcalc765 Finding x- and y-intercepts given a polynomial function
 pcalc782 Determining the end behavior of the graph of a polynomial function
 pcalc783 Matching graphs with polynomial functions
 pcalc738 Inferring properties of a polynomial function from its graph
 pcalc794 Using a graphing calculator to find local extrema of a polynomial function
 pcalc115 Using a graphing calculator to solve a word problem involving a local extremum of a polynomial function
 pcalc786 Using the remainder theorem to evaluate a polynomial
 pcalc787 The Factor Theorem
 pcalc758 Finding all possible rational zeros using the rational zeros theorem: Problem type 1
 pcalc759 Finding all possible rational zeros using the rational zeros theorem: Problem type 2
 pcalc788 Descartes' Rule of Signs
 pcalc743 Using the rational zeros theorem to find all zeros of a polynomial: Rational zeros
 pcalc744 Using the rational zeros theorem to find all zeros of a polynomial: Irrational zeros
 pcalc795 Using a graphing calculator to find zeros of a polynomial function
 pcalc704 Using a graphing calculator to solve a word problem involving a polynomial of degree 3

pcalc785 Multiplying expressions involving complex conjugates
 pcalc767 Finding a polynomial of a given degree with given zeros: Complex zeros
 pcalc745 Using the rational zeros theorem to find all zeros of a polynomial: Complex zeros
 pcalc703 Using the conjugate zeros theorem to find all zeros of a polynomial
 pcalc705 Linear factors theorem and conjugate zeros theorem
 alge108 Converting between logarithmic and exponential equations
 pcalc799 Converting between natural logarithmic and exponential equations
 alge232 Evaluating a logarithmic expression
 alge233 Solving an equation of the form $\log_b a = c$
 pcalc923 Translating the graph of a logarithmic function
 alge788 Graphing a logarithmic function: Basic
 pcalc800 The graph, domain, and range of a logarithmic function
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc708 Basic properties of logarithms
 pcalc779 Expanding a logarithmic expression: Problem type 1
 pcalc780 Expanding a logarithmic expression: Problem type 2
 alge787 Writing an expression as a single logarithm
 pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 pcalc803 Solving a multi-step equation involving a single logarithm
 pcalc804 Solving a multi-step equation involving natural logarithms
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge482 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic
 pcalc921 Solving an exponential equation by using natural logarithms: Decimal answers
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc614 Finding the initial or final amount in a word problem on exponential growth or decay
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay

Segments, Angles, and Triangles

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 geom359 Identifying congruent shapes on a grid
 geom407 Matching basic geometric terms with their definitions
 geom392 Introduction to segment addition
 geom394 Computing distances between decimals on a number line
 geom393 Finding a point on a number line given the length of a segment and another point
 geom395 Midpoint of a number line segment: Integers
 geom396 Midpoint of a number line segment: Decimals
 geom397 Using a segment's midpoint and endpoint to locate the other endpoint
 geom521 Segment addition and midpoints
 geom399 Finding a point that partitions a number line segment in a given fractional relationship
 geom390 Finding a point that partitions a number line segment in a given ratio
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom458 Identifying congruent segments in the plane
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 geom406 Finding a point that partitions a segment in the plane in a given fractional relationship
 geom391 Finding a point that partitions a segment in the plane in a given ratio
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom460 Naming angles, sides of angles, and vertices
 geom039 Finding supplementary and complementary angles

geom454 Introduction to angle addition
geom551 Finding the complement or supplement of an angle given a figure
geom552 Solving an equation involving complementary or supplementary angles
geom850 Angle addition with relationships between angles
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geom800 Identifying linear pairs and vertical angles
geom553 Finding angle measures given two intersecting lines
geom500 Solving equations involving vertical angles and linear pairs
geom001 Finding an angle measure of a triangle given two angles
geom389 Constructing congruent line segments
geom158 Constructing an angle bisector
geom159 Constructing congruent angles
geom154 Constructing the perpendicular bisector of a line segment
geom457 Making conjectures given a geometric construction
mstat042 Interpreting a Venn diagram of 2 sets
glogic001 Conditional statements and negations
glogic005 The converse, inverse, and contrapositive of a conditional statement
glogic011 Writing the converse, inverse, and contrapositive of a conditional statement and determining their truth values
glogic012 Writing a biconditional statement as a conditional statement and its converse and determining truth values
glogic013 Finding counterexamples to conjectures
glogic008 Conditional statements and deductive reasoning
geom665 Distinguishing between undefined terms, definitions, postulates, conjectures, and theorems
geom616 Introduction to proofs: Justifying statements
geom614 Proofs involving segment congruence
geom611 Proofs involving angle congruence
geom304 Identifying corresponding and alternate angles
geom554 Finding angle measures given two parallel lines cut by a transversal
geom531 Solving equations involving angles and a pair of parallel lines
geom503 Solving equations involving angles and two pairs of parallel lines
geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
geom150 Constructing a pair of perpendicular lines
geom157 Constructing a pair of parallel lines
geom835 Introduction to proofs involving parallel lines
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geom306 Acute, obtuse, and right triangles
geom626 Classifying scalene, isosceles, and equilateral triangles by side lengths
geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
geom322 Identifying coordinates that give right triangles
geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
geom908 Finding an angle measure for a triangle with an extended side
geom812 Finding an angle measure given extended triangles
geom813 Finding an angle measure given a triangle and parallel lines
geom628 Finding angle measures of a triangle given angles with variables
geom586 Establishing facts about the interior angles of a triangle
geom587 Establishing facts about the interior and exterior angles of a triangle
geom519 Identifying and naming congruent parts of congruent triangles
geom357 Identifying transformations
geom325 Determining if figures are related by rigid motions
geom327 Examining triangle congruence in terms of rigid motion
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geom418 Completing proofs involving congruent triangles using SSS or SAS
geom420 Introduction to proving triangles congruent using SSS or SAS
geom520 Identifying and naming congruent triangles
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geom421 Introduction to proving triangles congruent using ASA or AAS
geom837 Proofs involving congruent triangles and segment or angle bisectors
geom647 Separating overlapping triangles and identifying common features
geom840 Proofs involving congruent triangles that overlap: Basic
geom423 Proofs involving congruent triangles with parallel or perpendicular segments
geom424 Determining when to apply the HL congruence property

geom425 Introduction to proving triangles congruent using the HL property
 geom422 Introduction to proofs involving congruent triangles and CPCTC
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom645 Finding side lengths and angle measures of isosceles and equilateral triangles
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom629 Finding angle measures of an isosceles triangle given angles with variables
 geom363 Proofs of theorems involving isosceles triangles
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge408 Word problem involving the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
 geom862 Using the Pythagorean Theorem repeatedly
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom449 Classifying segments inside triangles
 geom446 Using the circumcenter of a triangle to find segment lengths
 geom447 Using the incenter of a triangle to find segment lengths and angle measures
 geom448 Using the centroid of a triangle to find segment lengths
 geom413 Introduction to the triangle midsegment theorem
 geom324 Proving the triangle midsegment theorem in the coordinate plane
 geom441 Proof involving points on the perpendicular bisector of a line segment
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom664 Using triangle inequality to determine possible lengths of a third side
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom543 Drawing a circle with a given radius or diameter
 geom545 Drawing triangles with given side lengths using a compass
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom451 Using the hinge theorem
 geom650 Indirect proof (proof by contradiction)

Polygons, Similarity, and Transformations

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 geom656 Finding the sum of the interior angle measures of a convex polygon given the number of sides
 geom655 Finding the number of sides of a convex polygon given the sum of the measures of the interior angles
 geom657 Finding a missing interior angle measure in a convex polygon
 geom658 Finding the measures of an interior angle and an exterior angle of a regular polygon
 geom659 Finding the number of sides of a regular polygon given the measure of an interior angle
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
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 geom833 Finding measures involving diagonals of rectangles
 geom436 Finding angle measures involving diagonals of a rhombus
 geom523 Conditions for quadrilaterals
 geom661 Completing proofs of theorems involving sides of a parallelogram
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 geom536 Drawing and identifying a polygon in the coordinate plane
 geom818 Finding the coordinates of a point to make a parallelogram
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geom321 Proving that a quadrilateral with given vertices is a parallelogram
geom408 Classifying parallelograms in the coordinate plane
geom863 Congruence in the coordinate plane
geom360 Identifying similar or congruent shapes on a grid
geom583 Finding angle measures of a triangle given two angles of a similar triangle
geom585 Finding angle measures and side ratios to determine if two triangles are similar
geom037 Similar polygons
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geom337 Indirect measurement
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geom326 Determining if figures are related by similarity transformations
geom328 Examining triangle similarity in terms of similarity transformations
geom364 Identifying and naming similar triangles
geom365 Proofs involving similar triangles
geom472 Completing proofs involving the triangle proportionality theorem
geom461 Proving the slope criterion for parallel or perpendicular lines
geom538 Finding lengths using scale models
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geom452 Identifying similar right triangles that overlap
alge814 Using right triangles to find the slope of a line
geom507 Right triangles and geometric mean
geom473 Proving the Pythagorean Theorem using similar triangles
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geom596 Translating a point and giving its coordinates: One step
geom909 Translating a point and giving its coordinates: Two steps
geom597 Properties of translated figures
geom598 Determining if figures are related by a translation
geom330 Translating a polygon
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geom375 Understanding the definition of a translation
arith408 Reflecting a point across an axis
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geom590 Reflecting a point across an axis and giving its coordinates
arith407 Finding the coordinates of a point reflected across an axis
geom560 Finding the coordinates of a point reflected across both axes
geom534 Reflecting a polygon across the x-axis or y-axis
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geom592 Determining if figures are related by a reflection
geom332 Reflecting a polygon over a vertical or horizontal line
geom333 Finding the coordinates of three points reflected over an axis
geom602 Finding the coordinates of a point reflected across an axis and translated
geom376 Understanding the definition of a reflection
geom593 Rotating a point and giving its coordinates
geom594 Properties of rotated figures
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geom335 Rotating a figure about the origin
geom377 Understanding the definition of a rotation
geom334 Drawing lines of symmetry
geom815 Finding an angle of rotation
geom624 Identifying rotational symmetry and angles of rotation
geom831 Rotational and point symmetries
geom369 Writing a rule to describe a translation
geom370 Writing a rule to describe a reflection
geom371 Writing a rule to describe a rotation
geom373 Identifying transformations that map a quadrilateral onto itself
geom374 Identifying transformations that map a regular polygon onto itself
geom580 Determining if figures are congruent and related by a transformation
geom581 Determining if figures are congruent and related by a sequence of transformations

geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
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 geom372 Writing a rule to describe a dilation
 geom582 Determining if figures are similar and related by a sequence of transformations
 geom463 Exploring similarity of circles
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geom022 Area of a parallelogram
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom430 Word problem on population density
 geom426 Finding the perimeter of a triangle, trapezoid, or parallelogram in the coordinate plane
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane
 geom440 Finding the area of a right triangle using the Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom023 Area of a trapezoid
 geom434 Area of a rhombus
 geom435 Finding the area of a rhombus using the Pythagorean Theorem
 geom438 Finding the area of a trapezoid, rhombus, or kite in the coordinate plane
 geom213 Area of a regular polygon
 geom479 Finding the area of a regular polygon using special right triangles
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 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom427 Informal argument for the formula of the circumference of a circle
 geom838 Circumference ratios
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 geom026 Area of a circle
 geom802 Circumference and area of a circle
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 geom570 Distinguishing between the area and circumference of a circle
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 geom126 Area of a sector of a circle: Exact answer in terms of pi
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 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
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geom443 Identifying geometric shapes that model real-world objects
geom491 Identifying properties of Euclidean and spherical geometries
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom578 Word problem involving the surface area of a cylinder
geom484 Word problem involving the surface area of rectangular prisms and cylinders
geom483 Word problem involving the surface area of rectangular prisms and pyramids
geom354 Volume of a rectangular prism made of unit cubes
geom555 Distinguishing between surface area and volume
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
geom865 Measuring the net of a solid to find surface area or volume
geom382 Volume of an oblique rectangular prism
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom386 Computations involving density, mass, and volume
geom387 Word problem on density involving the volume of a rectangular solid
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom035 Volume of a cylinder
geom385 Informal argument for the formula of the volume of a cylinder
geom383 Volume of an oblique cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom388 Word problem on density involving the volume of a cylindrical solid
geom384 Using cross sections to identify solids with the same volume
geom133 Ratio of volumes
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom842 Surface area of a sphere
geom841 Volume of a sphere
geom574 Word problem involving the volume of a sphere
geom488 Identifying similar solids
geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
geom489 Computing side length, surface area, and volume for similar solids
geom654 Informal argument for the formula of the volume of a cone
geom490 Word problem involving volumes of similar solids
geom464 Identifying chords, secants, and tangents of a circle
geom848 Tangents of a circle: Problem type 1
geom849 Tangents of a circle: Problem type 2
geom470 Constructing a tangent of a circle
geom465 Naming and finding measures of central angles, inscribed angles, and arcs of a circle
geom467 Applying properties of radii, diameters, and chords
geom466 Arc length
geom805 Arc length and area of a sector of a circle
geom653 Computing ratios of arc lengths to radii and describing the result
geom468 Central angles and inscribed angles of a circle
geom469 Central angles and angles involving chords and tangents of a circle
geom666 Inscribed angles in relation to a diameter or a polygon inscribed in a circle

geom667 Inscribed angles and angles involving chords and tangents of a circle
 geom492 Establishing facts about a quadrilateral inscribed in a circle
 geom312 Inscribing an equilateral triangle or a regular hexagon in a circle
 geom313 Inscribing a square in a circle
 geom314 Inscribing a circle in a triangle
 geom315 Circumscribing a circle about a triangle
 geom567 Angles of intersecting secants and tangents
 geom568 Lengths of chords, secants, and tangents

Sequences, Probability, and Conics

alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc715 Finding a specified term of an arithmetic sequence given two terms of the sequence
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence
 pcalc718 Sum of the first n terms of an arithmetic sequence
 alge732 Finding patterns in shapes
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc717 Finding a specified term of a geometric sequence given two terms of the sequence
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 pcalc719 Sum of the first n terms of a geometric sequence
 pcalc720 Sum of an infinite geometric series
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat047 Introduction to expectation
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat031 Interpreting a stem-and-leaf plot
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean

stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 stat009 Percentiles
 mstat043 Interpreting a Venn diagram of 3 sets
 stat119 Venn diagrams: Two events
 stat101 Venn diagrams: Word problems
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 pcalc809 Introduction to permutations and combinations
 pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 pcalc090 Permutations and combinations: Problem type 3
 pcalc087 Binomial formula
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat046 Experimental and theoretical probability
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat116 Probabilities of a permutation and a combination
 mstat048 Odds of an event
 mstat011 Area as probability
 mstat019 Identifying independent events given descriptions of experiments
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 mstat115 Determining outcomes for compound events and complements of events
 mstat110 Using a Venn diagram to understand the multiplication rule for probability
 mstat107 Outcomes and event probability: Conditional probability
 mstat104 Identifying independent events given values of probabilities
 mstat105 Computing conditional probability using a two-way frequency table
 mstat106 Computing conditional probability to make an inference using a two-way frequency table
 mstat118 Conditional probability: Basic
 mstat109 Using a Venn diagram to understand the addition rule for probability
 mstat108 Outcomes and event probability: Addition rule
 mstat032 Probability of the union of two events
 mstat117 Probability of intersection or union: Word problems
 stat174 Binomial problems: Basic
 stat155 Binomial problems: Advanced
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat114 Using a random number table to make a fair decision
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat082 Computing mean absolute deviation from a list of numerical values
 stat021 Population standard deviation
 stat852 Word problem involving calculations from a normal distribution
 pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 geom494 Deriving the equation of a parabola given its focus and directrix
 pcalc068 Writing an equation of a parabola given the vertex and the focus

pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 pcalc734 Graphing an ellipse given its equation in standard form
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$
 pcalc071 Graphing an ellipse given its equation in general form
 pcalc072 Finding the foci of an ellipse given its equation in general form
 pcalc074 Writing an equation of an ellipse given the center, an endpoint of an axis, and the length of the other axis
 pcalc735 Graphing a hyperbola given its equation in standard form
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 pcalc076 Graphing a hyperbola given its equation in general form
 pcalc077 Finding the foci of a hyperbola given its equation in general form
 pcalc078 Writing an equation of a hyperbola given the foci and the vertices
 pcalc736 Classifying conics given their equations
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 pcalc796 Using a graphing calculator to solve a system of equations
 pcalc098 Solving a system of nonlinear equations: Problem type 1
 pcalc096 Graphing a system of nonlinear inequalities: Problem type 1
 pcalc097 Graphing a system of nonlinear inequalities: Problem type 2

Trigonometry

pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle
 pcalc001 Converting degrees-minutes-seconds to decimal degrees
 pcalc661 Converting a decimal degree to degrees-minutes-seconds
 pcalc002 Converting between degree and radian measure: Problem type 1
 pcalc621 Converting between degree and radian measure: Problem type 2
 pcalc006 Sketching an angle in standard position
 pcalc622 Coterminal angles
 pcalc005 Arc length and central angle measure
 pcalc623 Area of a sector of a circle
 pcalc627 Finding coordinates on the unit circle for special angles
 pcalc629 Trigonometric functions and special angles: Problem type 1
 pcalc628 Finding trigonometric ratios from a point on the unit circle
 pcalc630 Trigonometric functions and special angles: Problem type 2
 pcalc631 Trigonometric functions and special angles: Problem type 3

pcalc626 Reference angles: Problem type 1
 pcalc632 Reference angles: Problem type 2
 pcalc671 Determining the location of a terminal point given the signs of trigonometric values
 pcalc011 Finding values of trigonometric functions given information about an angle: Problem type 1
 pcalc012 Finding values of trigonometric functions given information about an angle: Problem type 2
 pcalc013 Finding values of trigonometric functions given information about an angle: Problem type 3
 pcalc016 Values of inverse trigonometric functions
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom409 Proving the law of cosines
 geom439 Using trigonometry to find the area of a right triangle
 pcalc646 Finding the area of a triangle using trigonometry
 geom319 Expressing the area of a triangle in terms of the sine of one of its angles
 pcalc647 Heron's formula
 pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
 pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
 pcalc014 Sketching the graph of $y = a \sin(bx+c)$ or $y = a \cos(bx+c)$
 pcalc633 Amplitude and period of sine and cosine functions
 pcalc634 Amplitude, period, and phase shift of sine and cosine functions
 pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1
 pcalc636 Writing the equation of a sine or cosine function given its graph: Problem type 2
 pcalc640 Word problem involving a sine or cosine function: Problem type 1
 pcalc641 Word problem involving a sine or cosine function: Problem type 2
 pcalc637 Matching graphs and equations for secant, cosecant, tangent, and cotangent functions
 pcalc017 Sketching the graph of a secant or cosecant function: Problem type 1
 pcalc638 Sketching the graph of a secant or cosecant function: Problem type 2
 pcalc105 Sketching the graph of a tangent or cotangent function: Problem type 1
 pcalc015 Sketching the graph of a tangent or cotangent function: Problem type 2
 pcalc648 Simplifying trigonometric expressions
 pcalc666 Using cofunction identities
 pcalc110 Verifying a trigonometric identity
 pcalc034 Proving trigonometric identities: Problem type 1
 pcalc404 Proving trigonometric identities: Problem type 2
 pcalc405 Proving trigonometric identities: Problem type 3
 pcalc406 Proving trigonometric identities using odd and even properties
 pcalc029 Sum and difference identities: Problem type 1
 pcalc663 Sum and difference identities: Problem type 2
 pcalc664 Sum and difference identities: Problem type 3
 pcalc403 Proving trigonometric identities using sum and difference properties
 pcalc030 Double-angle identities: Problem type 1
 pcalc667 Double-angle identities: Problem type 2
 pcalc662 Half-angle identities: Problem type 1
 pcalc665 Half-angle identities: Problem type 2
 pcalc402 Proving trigonometric identities using double-angle properties
 pcalc650 Finding solutions in an interval for a basic equation involving sine or cosine
 pcalc651 Finding solutions in an interval for a basic tangent, cotangent, secant, or cosecant equation
 pcalc660 Solving a basic trigonometric equation using a calculator
 pcalc020 Solving a basic trigonometric equation involving sine or cosine
 pcalc021 Solving a basic trigonometric equation involving tangent, cotangent, secant, or cosecant
 pcalc670 Finding solutions in an interval for a trigonometric equation in factored form
 pcalc652 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 1
 pcalc653 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 2
 pcalc654 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 1
 pcalc657 Finding solutions in an interval for an equation with sine and cosine using double-angle identities
 pcalc668 Solving a trigonometric equation modeling a real-world situation
 pcalc811 Using a graphing calculator to solve a trigonometric equation
 pcalc022 Solving a trigonometric equation involving a squared function: Problem type 1

pcalc023 Solving a trigonometric equation involving a squared function: Problem type 2
pcalc024 Solving a trigonometric equation involving more than one function
pcalc027 Solving a trigonometric equation using double-angle identities
pcalc060 Magnitude of a vector given in component form
geom858 Scalar multiplication of a vector: Geometric Approach
pcalc739 Multiplication of a vector by a scalar: Geometric approach
pcalc063 Translation of a vector
geom856 Vector addition and scalar multiplication: Component form
vector008 Linear combination of vectors: Component form
geom857 Vector addition: Geometric approach
vector007 Vector subtraction: Geometric approach
vector002 Finding the magnitude and direction of a vector given its graph
vector005 Finding the components of a vector given its graph
vector009 Dot product of vectors given in component form
vector010 Using the dot product to find perpendicular vectors
pcalc730 Finding the angle between two vectors given in component form

B.39 Integrated Mathematics III

Real Numbers

arith067 Simplifying a fraction
arith212 Equivalent fractions
arith711 Division involving zero
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith813 Multiplication of 3 fractions
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith695 Complex fraction without variables: Problem type 1
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith733 Using a calculator to convert a fraction to a rounded decimal
arith624 Addition of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number

arith083 Division of a decimal by a power of ten
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith830 Reading decimal position on a number line: Hundredths
alge286 Plotting integers on a number line
arith403 Finding opposites of integers
arith605 Plotting rational numbers on a number line
arith092 Using a common denominator to order fractions
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith691 Ordering integers
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root
arith515 Approximating the location of irrational numbers on a number line
arith712 Ordering real numbers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith233 Introduction to exponents
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith821 Exponents and fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3
arith753 Squaring decimal bases: Products greater than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula

alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
mstat065 Converting between temperatures in Fahrenheit and Celsius
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge700 Combining like terms: Whole number coefficients
alge432 Introduction to adding fractions with variables and common denominators
alge607 Combining like terms: Integer coefficients
alge187 Properties of addition
alge666 Combining like terms: Fractional coefficients
alge665 Combining like terms: Decimal coefficients
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
arith056 Factors
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge293 Combining like terms in a quadratic expression
geom349 Naming segments, rays, and lines
geom151 Measuring an angle with the protractor
geom303 Acute, obtuse, and right angles
geom306 Acute, obtuse, and right triangles
geom460 Naming angles, sides of angles, and vertices
geom359 Identifying congruent shapes on a grid
geom360 Identifying similar or congruent shapes on a grid
geom519 Identifying and naming congruent parts of congruent triangles
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom618 Perimeter of a polygon involving mixed numbers and fractions
geom221 Finding the missing length in a figure
geom353 Perimeter of a piecewise rectangular figure
alge615 Writing algebraic expressions for the perimeter of a figure
geom078 Sides of polygons having the same perimeter
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom869 Estimates and exact answers
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom801 Area of a triangle
geom347 Introduction to a circle: Diameter, radius, and chord
geom016 Circumference of a circle
geom026 Area of a circle

geom802 Circumference and area of a circle
 geom477 Circumference and area of a circle: Exact answers in terms of pi
 geom868 Classifying solids
 geom550 Identifying horizontal and vertical cross sections of solids
 geom381 Identifying solids generated by rotations of two-dimensional regions
 geom443 Identifying geometric shapes that model real-world objects
 geom311 Volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit012 Time unit conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit009 U.S. Customary area unit conversion with whole number values
 unit010 Metric area unit conversion with decimal values
 arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 arith825 Simplifying a ratio of decimals
 arith064 Solving a word problem on proportions using a unit rate
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio

Linear Equations and Inequalities

alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge815 Introduction to using substitution to solve a linear equation
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side

alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
alge208 Solving a two-step equation with signed fractions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge603 Introduction to solving an absolute value equation
alge864 Solving an absolute value equation: Problem type 1
alge865 Solving an absolute value equation: Problem type 2
alge866 Solving an absolute value equation: Problem type 3
alge867 Solving an absolute value equation: Problem type 4
alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
alge016 Translating a sentence into a one-step equation
alge841 Translating a sentence into a multi-step equation
arith504 Writing an equation to represent a proportional relationship
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge671 Choosing stories that can be represented by given one-step equations
alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
alge618 Comparing arithmetic and algebraic solutions to a word problem
alge672 Choosing stories that can be represented by given two-step equations
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
alge014 Solving a word problem with two unknowns using a linear equation
alge673 Writing an equation to represent a real-world problem: Variable on both sides
alge674 Writing and solving a real-world problem given an equation with the variable on both sides
alge730 Writing a multi-step equation for a real-world situation
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge218 Solving a word problem involving rates and time conversion
alge823 Solving a one-step word problem using the formula $d = rt$
alge796 Solving a distance, rate, time problem using a linear equation
unit035 Converting between compound units: Basic
unit036 Converting between compound units: Advanced
arith514 Converting a repeating decimal to a fraction
geom392 Introduction to segment addition
geom039 Finding supplementary and complementary angles
geom454 Introduction to angle addition

geom001 Finding an angle measure of a triangle given two angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom564 Finding side lengths of squares given an area and a perimeter
 geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
 geom444 Word problem on optimizing an area or perimeter
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom430 Word problem on population density
 geom386 Computations involving density, mass, and volume
 geom387 Word problem on density involving the volume of a rectangular solid
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith834 Converting between percentages and decimals
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith686 Writing a ratio as a percentage
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith854 Computing a percent mixture
 alge795 Solving a percent mixture problem using a linear equation
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 alge015 Translating a sentence by using an inequality symbol
 alge653 Introduction to identifying solutions to an inequality
 alge845 Translating a sentence into a one-step inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set004 Set builder and interval notation
 set002 Union and intersection of finite sets
 set005 Union and intersection of intervals
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers

alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge747 Solving a compound linear inequality: Interval notation
 alge621 Solving a word problem using a one-step linear inequality
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Graphing, Functions, and Systems

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 mstat007 Interpreting a line graph
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid

alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge625 Identifying linear equations: Basic
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge314 Finding the slope, y-intercept, and equation given a table of values
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge318 Finding the slope and a point on a line given its equation in point-slope form
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge313 Writing an equation in standard form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge322 Comparing linear functions to the parent function $y = x$
 geom358 Identifying parallel and perpendicular lines
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 geom462 Identifying parallel and perpendicular lines from coordinates
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge991 Solving a linear equation by graphing
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat074 Identifying correlation and causation
 fun032 Identifying functions from relations
 fun010 Vertical line test

fun016 Domain and range from ordered pairs
fun001 Table for a linear function
pcalc760 Evaluating functions: Linear and quadratic or cubic
fun033 Variable expressions as inputs of functions: Problem type 1
fun030 Evaluating a piecewise-defined function
alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
alge990 Domain and range of a linear function that models a real-world situation
fun026 Finding an output of a function from its graph
pcalc761 Finding inputs and outputs of a function from its graph
fun007 Domain and range from the graph of a discrete relation
alge312 Finding domain and range from a linear graph in context
fun024 Domain and range from the graph of a continuous function
fun025 Domain and range from the graph of a piecewise function
pcalc750 Finding intercepts of a nonlinear function given its graph
alge999 Finding where a function is increasing, decreasing, or constant given the graph
pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
pcalc752 Finding local maxima and minima of a function given the graph
mstat018 Choosing a graph to fit a narrative: Basic
mstat051 Choosing a graph to fit a narrative: Advanced
alge896 Graphing an integer function and finding its range for a given domain
alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
alge913 Graphing an absolute value equation of the form $y = A - |x - h|$
alge900 Graphing an absolute value equation in the plane: Basic
alge168 Graphing an absolute value equation in the plane: Advanced
alge954 Graphing a parabola of the form $y = ax^2$
alge955 Graphing a parabola of the form $y = ax^2 + c$
alge572 Graphing a function of the form $f(x) = ax^2$
alge573 Graphing a function of the form $f(x) = ax^2 + c$
alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
alge262 Graphing a cubic function of the form $y = ax^3$
fun031 Graphing a piecewise-defined function: Problem type 1
alge997 Finding the average rate of change of a function given its equation
alge998 Finding the average rate of change of a function given its graph
alge953 Translating the graph of a parabola: One step
alge723 How the leading coefficient affects the shape of a parabola
alge898 Translating the graph of an absolute value function: One step
alge899 Translating the graph of an absolute value function: Two steps
alge901 How the leading coefficient affects the graph of an absolute value function
alge185 Writing an equation for a function after a vertical translation
pcalc769 Translating the graph of a function: One step
pcalc770 Translating the graph of a function: Two steps
pcalc771 Transforming the graph of a function by reflecting over an axis
pcalc772 Transforming the graph of a function by shrinking or stretching
pcalc773 Transforming the graph of a function using more than one transformation
fun020 Writing an equation for a function after a vertical and horizontal translation
alge914 Identifying solutions to a system of linear equations
alge075 Classifying systems of linear equations from graphs
alge725 Graphically solving a system of linear equations
pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
alge317 Writing a system of linear equations given its graph
alge816 Solving a system of linear equations of the form $y = mx + b$
alge751 Solving a system of linear equations using substitution
alge915 Solving a system of linear equations using elimination with addition
alge076 Solving a system of linear equations using elimination with multiplication and addition
alge916 Solving a system of linear equations with fractional coefficients
alge917 Solving a system of linear equations with decimal coefficients
alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions

alge077 Creating an inconsistent system of linear equations
 alge988 Identifying the operations used to create equivalent systems of equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
 alge316 Writing an inequality given its graph in the plane: Slanted boundary line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc095 Linear programming
 pcalc094 Solving a word problem using linear programming
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc039 Multiplication of matrices: Basic
 pcalc710 Multiplication of matrices: Advanced
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 pcalc046 Solving a system of linear equations given its augmented matrix
 pcalc040 Finding the inverse of a 2x2 matrix
 pcalc041 Finding the inverse of a 3x3 matrix
 pcalc042 Finding the determinant of a 2x2 matrix
 pcalc711 Using the inverse of a matrix to solve a 3x3 system of linear equations
 pcalc043 Finding the determinant of a 3x3 matrix
 pcalc045 Using Cramer's rule to solve a 2x2 system of linear equations
 pcalc047 Using Cramer's rule to solve a 3x3 system of linear equations

Exponents and Polynomials

alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero

arith684 Power of 10: Negative exponent
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
arith024 Ordering numbers with negative exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge961 Introduction to the product rule with negative exponents
alge028 Product rule with negative exponents
alge755 Quotient rule with negative exponents: Problem type 1
alge926 Quotient rule with negative exponents: Problem type 2
alge025 Power of a power rule with negative exponents
alge799 Power rules with negative exponents
alge928 Power and quotient rules with negative exponents: Problem type 1
alge929 Power and quotient rules with negative exponents: Problem type 2
alge757 Power, product, and quotient rules with negative exponents
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot021 Expressing calculator notation as scientific notation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge932 Simplifying a sum or difference of multivariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge081 Multiplying conjugate binomials: Multivariate
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
alge973 Multiplying binomials with negative coefficients
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge763 Polynomial long division: Problem type 3
pcalc117 Synthetic division
alge985 Closure properties of integers and polynomials
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
alge605 Factoring a linear binomial
alge736 Introduction to the GCF of two monomials
alge930 Greatest common factor of three univariate monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge949 Factoring out a binomial from a polynomial: GCF factoring, basic

alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge046 Roots of a product of polynomials
 alge323 Finding the zeros of a quadratic function given its equation
 alge163 Writing a quadratic equation given the roots and the leading coefficient
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 alge715 Domain of a rational function: Excluded values
 alge454 Simplifying a ratio of factored polynomials: Linear factors
 alge455 Simplifying a ratio of factored polynomials: Factors with exponents
 alge456 Simplifying a ratio of polynomials using GCF factoring
 alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
 alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge459 Simplifying a ratio of polynomials: Problem type 3
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge460 Multiplying rational expressions made up of linear expressions
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
 alge462 Multiplying rational expressions involving multivariate quadratics
 alge054 Dividing rational expressions involving multivariate monomials

alge463 Dividing rational expressions involving linear expressions
alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
alge465 Dividing rational expressions involving multivariate quadratics
alge466 Multiplication and division of 3 rational expressions
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
alge428 Finding the LCD of rational expressions with linear denominators: Common factors
alge429 Finding the LCD of rational expressions with quadratic denominators
alge430 Writing equivalent rational expressions with monomial denominators
alge431 Writing equivalent rational expressions with polynomial denominators
alge304 Writing equivalent rational expressions involving opposite factors
alge433 Adding rational expressions with common denominators and monomial numerators
alge056 Adding rational expressions with common denominators and binomial numerators
alge434 Adding rational expressions with common denominators and GCF factoring
alge435 Adding rational expressions with common denominators and quadratic factoring
alge436 Adding rational expressions with different denominators and a single occurrence of a variable
alge437 Adding rational expressions with denominators ax and bx : Basic
alge438 Adding rational expressions with denominators ax and bx : Advanced
alge439 Adding rational expressions with denominators axn and bxm
alge440 Adding rational expressions with multivariate monomial denominators: Basic
alge226 Adding rational expressions with multivariate monomial denominators: Advanced
alge441 Adding rational expressions with linear denominators without common factors: Basic
alge442 Adding rational expressions with linear denominators without common factors: Advanced
alge443 Adding rational expressions with linear denominators with common factors: Basic
alge444 Adding rational expressions with linear denominators with common factors: Advanced
alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
alge661 Adding rational expressions involving different quadratic denominators
alge446 Adding 3 rational expressions with different quadratic denominators
arith696 Complex fraction without variables: Problem type 2
alge470 Complex fraction involving univariate monomials
alge058 Complex fraction involving multivariate monomials
alge471 Complex fraction: GCF factoring
alge472 Complex fraction: Quadratic factoring
alge473 Complex fraction made of sums involving rational expressions: Problem type 1
alge474 Complex fraction made of sums involving rational expressions: Problem type 2
alge475 Complex fraction made of sums involving rational expressions: Problem type 3
alge476 Complex fraction made of sums involving rational expressions: Problem type 4
alge477 Complex fraction made of sums involving rational expressions: Problem type 5
alge478 Complex fraction made of sums involving rational expressions: Problem type 6
alge479 Complex fraction made of sums involving rational expressions: Multivariate
alge480 Complex fraction with negative exponents: Problem type 1
alge481 Complex fraction with negative exponents: Problem type 2
alge162 Complex fraction that contains a complex fraction
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
alge425 Solving a rational equation that simplifies to quadratic: Denominator x
alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3

arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge450 Solving a distance, rate, time problem using a rational equation
 alge059 Ordering fractions with variables
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation
 pcalc917 Finding the asymptotes of a rational function: Constant over linear
 pcalc918 Finding the asymptotes of a rational function: Linear over linear
 pcalc790 Finding horizontal and vertical asymptotes of a rational function: Quadratic numerator or denominator
 alge515 Graphing a rational function: Constant over linear
 alge516 Graphing a rational function: Linear over linear
 pcalc109 Graphing a rational function: Quadratic over linear
 pcalc792 Graphing rational functions with holes
 pcalc791 Matching graphs with rational functions: Two vertical asymptotes
 alge784 Solving a quadratic inequality written in factored form
 alge771 Solving a quadratic inequality
 alge783 Solving a rational inequality: Problem type 1
 pcalc677 Solving a rational inequality: Problem type 2

Radicals

alge413 Finding all square roots of a number
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith761 Square roots of integers raised to even exponents
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 alge537 Using absolute value to simplify square roots of perfect square monomials
 arith094 Cube root of an integer
 alge549 Finding n th roots of perfect n th powers with signs
 arith768 Finding the n th root of a perfect n th power fraction
 alge550 Finding the n th root of a perfect n th power monomial
 alge538 Using absolute value to simplify higher radical expressions
 alge539 Table for a square root function
 alge546 Evaluating a cube root function
 alge565 Domain of a square root function: Basic
 alge566 Domain of a square root function: Advanced
 alge547 Domains of higher root functions
 alge543 Graphing a square root function: Problem type 1
 alge544 Graphing a square root function: Problem type 2
 alge545 Graphing a square root function: Problem type 3
 alge548 Graphing a cube root function
 alge812 Converting between radical form and exponent form
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge561 Rational exponents: Unit fraction exponents and bases involving signs
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge558 Rational exponents: Product rule
 alge559 Rational exponents: Quotient rule

alge773 Rational exponents: Products and quotients with negative exponents
alge562 Rational exponents: Power of a power rule
alge249 Rational exponents: Powers of powers with negative exponents
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
pcalc682 Evaluating functions: Absolute value, rational, radical
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
alge275 Simplifying a radical expression with two variables
alge273 Simplifying a higher root of a whole number
alge551 Introduction to simplifying a higher radical expression
alge552 Simplifying a higher radical expression: Univariate
alge811 Simplifying a higher radical expression: Multivariate
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
alge533 Square root addition or subtraction with three terms
alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
alge532 Simplifying a sum or difference of radical expressions: Univariate
alge084 Simplifying a sum or difference of radical expressions: Multivariate
alge554 Simplifying a sum or difference of higher roots
alge555 Simplifying a sum or difference of higher radical expressions
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
arith039 Square root multiplication: Advanced
alge522 Introduction to simplifying a product of radical expressions: Univariate
alge523 Simplifying a product of radical expressions: Univariate
alge640 Simplifying a product of radical expressions: Multivariate
alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
alge556 Introduction to simplifying a product of higher roots
alge557 Simplifying a product of higher radical expressions
alge525 Introduction to simplifying a product involving square roots using the distributive property
alge526 Simplifying a product involving square roots using the distributive property: Basic
alge276 Simplifying a product involving square roots using the distributive property: Advanced
alge774 Special products of radical expressions: Conjugates and squaring
alge984 Classifying sums and products as rational or irrational
arith766 Simplifying a quotient of square roots
alge530 Simplifying a quotient involving a sum or difference with a square root
alge527 Rationalizing a denominator: Quotient involving square roots
alge528 Rationalizing a denominator: Square root of a fraction
alge529 Rationalizing a denominator: Quotient involving a monomial
alge534 Rationalizing a denominator using conjugates: Integer numerator
alge535 Rationalizing a denominator using conjugates: Square root in numerator
alge536 Rationalizing a denominator using conjugates: Variable in denominator
alge564 Rationalizing a denominator: Quotient involving a higher radical
alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
alge563 Simplifying products or quotients of higher radicals with different indices: Univariate
alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
alge400 Introduction to solving a radical equation
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
alge411 Solving a radical equation with a quadratic expression under the radical
alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
alge412 Algebraic symbol manipulation with radicals
alge542 Word problem involving radical equations: Basic
alge409 Word problem involving radical equations: Advanced
alge410 Solving an equation with a root index greater than 2: Problem type 1
alge417 Solving an equation with a root index greater than 2: Problem type 2

alge698 Solving an equation of the form $x^3 = a$ using integers
 geom565 Finding the side length of a cube given its volume
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge228 Solving an equation using the odd-root property: Problem type 2
 alge416 Solving an equation with exponent $1/a$: Problem type 1
 alge418 Solving an equation with exponent $1/a$: Problem type 2
 alge778 Using i to rewrite square roots of negative numbers
 alge779 Simplifying a product and quotient involving square roots of negative numbers
 pcalc048 Adding or subtracting complex numbers
 pcalc049 Multiplying complex numbers
 pcalc050 Dividing complex numbers
 pcalc053 Simplifying a power of i

Polynomial, Exponential, and Logarithmic Functions

alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 pcalc051 Solving a quadratic equation with complex roots
 alge214 Discriminant of a quadratic equation
 alge193 Discriminant of a quadratic equation with parameter
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge782 Solving an equation that can be written in quadratic form: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 alge974 Finding the vertex, x -intercepts, and axis of symmetry from the graph of a parabola
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge320 Writing a quadratic function given its zeros
 alge277 Finding the x -intercept(s) and the vertex of a parabola
 pcalc714 Using a graphing calculator to find the zeros of a quadratic function
 pcalc793 Using a graphing calculator to find the x -intercept(s) and vertex of a quadratic function
 alge319 Rewriting a quadratic function in standard form
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 fun019 Sum, difference, and product of two functions
 alge786 Quotient of two functions: Basic
 alge716 Introduction to the composition of two functions
 fun022 Composition of two functions: Basic
 pcalc776 Expressing a function as a composition of two functions
 fun021 Composition of two functions: Domain and range
 alge129 Composition of two functions: Advanced
 pcalc924 Determining whether an equation defines a function: Basic

pcalc757 Determining whether an equation defines a function: Advanced
fun011 Horizontal line test
pcalc777 Determining whether two functions are inverses of each other
fun012 Inverse functions: Linear, discrete
alge130 Inverse functions: Rational
pcalc778 Inverse functions: Quadratic, cubic, radical
alge971 Table for an exponential function
alge969 Graphing an exponential function: $f(x) = ax$
alge970 Graphing an exponential function: $f(x) = a(b)^x$
alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
alge321 Finding domain and range from the graph of an exponential function
pcalc922 Translating the graph of an exponential function
pcalc797 The graph, domain, and range of an exponential function
pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^{x-b} + c$
alge830 Evaluating an exponential function that models a real-world situation
pcalc919 Evaluating an exponential function with base e that models a real-world situation
alge177 Finding a final amount in a word problem on exponential growth or decay
alge741 Finding the final amount in a word problem on compound interest
alge966 Finding the initial amount and rate of change given an exponential function
alge968 Writing an equation that models exponential growth or decay
alge967 Writing an exponential function rule given a table of ordered pairs
mstat103 Choosing an exponential model and using it to make a prediction
alge993 Comparing linear, polynomial, and exponential functions
pcalc114 Even and odd functions: Problem type 1
pcalc764 Finding zeros of a polynomial function written in factored form
pcalc766 Finding a polynomial of a given degree with given zeros: Real zeros
pcalc765 Finding x - and y -intercepts given a polynomial function
pcalc782 Determining the end behavior of the graph of a polynomial function
pcalc783 Matching graphs with polynomial functions
pcalc738 Inferring properties of a polynomial function from its graph
pcalc794 Using a graphing calculator to find local extrema of a polynomial function
pcalc115 Using a graphing calculator to solve a word problem involving a local extremum of a polynomial function
pcalc786 Using the remainder theorem to evaluate a polynomial
pcalc787 The Factor Theorem
pcalc758 Finding all possible rational zeros using the rational zeros theorem: Problem type 1
pcalc759 Finding all possible rational zeros using the rational zeros theorem: Problem type 2
pcalc788 Descartes' Rule of Signs
pcalc743 Using the rational zeros theorem to find all zeros of a polynomial: Rational zeros
pcalc744 Using the rational zeros theorem to find all zeros of a polynomial: Irrational zeros
pcalc795 Using a graphing calculator to find zeros of a polynomial function
pcalc704 Using a graphing calculator to solve a word problem involving a polynomial of degree 3
pcalc785 Multiplying expressions involving complex conjugates
pcalc767 Finding a polynomial of a given degree with given zeros: Complex zeros
pcalc745 Using the rational zeros theorem to find all zeros of a polynomial: Complex zeros
pcalc703 Using the conjugate zeros theorem to find all zeros of a polynomial
pcalc705 Linear factors theorem and conjugate zeros theorem
alge108 Converting between logarithmic and exponential equations
pcalc799 Converting between natural logarithmic and exponential equations
alge232 Evaluating a logarithmic expression
alge233 Solving an equation of the form $\log_b a = c$
pcalc923 Translating the graph of a logarithmic function
alge788 Graphing a logarithmic function: Basic
pcalc800 The graph, domain, and range of a logarithmic function
pcalc104 Graphing a logarithmic function: Advanced
pcalc708 Basic properties of logarithms
pcalc779 Expanding a logarithmic expression: Problem type 1
pcalc780 Expanding a logarithmic expression: Problem type 2
alge787 Writing an expression as a single logarithm
pcalc612 Change of base for logarithms: Problem type 1
pcalc613 Change of base for logarithms: Problem type 2
pcalc803 Solving a multi-step equation involving a single logarithm

pcalc804 Solving a multi-step equation involving natural logarithms
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge482 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic
 pcalc921 Solving an exponential equation by using natural logarithms: Decimal answers
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc614 Finding the initial or final amount in a word problem on exponential growth or decay
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay

Sequences, Probability, and Conics

alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc715 Finding a specified term of an arithmetic sequence given two terms of the sequence
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence
 pcalc718 Sum of the first n terms of an arithmetic sequence
 alge732 Finding patterns in shapes
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc717 Finding a specified term of a geometric sequence given two terms of the sequence
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 pcalc719 Sum of the first n terms of a geometric sequence
 pcalc720 Sum of an infinite geometric series
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat047 Introduction to expectation
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat031 Interpreting a stem-and-leaf plot
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat003 Mode of a data set

mstat055 Finding the mode and range of a data set
mstat001 Mean of a data set
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
stat009 Percentiles
mstat042 Interpreting a Venn diagram of 2 sets
mstat043 Interpreting a Venn diagram of 3 sets
stat119 Venn diagrams: Two events
stat101 Venn diagrams: Word problems
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
pcalc809 Introduction to permutations and combinations
pcalc810 Permutations and combinations: Problem type 1
pcalc089 Permutations and combinations: Problem type 2
pcalc090 Permutations and combinations: Problem type 3
pcalc087 Binomial formula
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
mstat046 Experimental and theoretical probability
stat106 Outcomes and event probability
stat112 Probabilities involving two dice
mstat116 Probabilities of a permutation and a combination
mstat048 Odds of an event
mstat011 Area as probability
mstat019 Identifying independent events given descriptions of experiments
stat850 Probability of independent events
stat851 Probability of dependent events
stat117 Probabilities of draws with replacement
stat118 Probabilities of draws without replacement
mstat115 Determining outcomes for compound events and complements of events
mstat110 Using a Venn diagram to understand the multiplication rule for probability
mstat107 Outcomes and event probability: Conditional probability
mstat104 Identifying independent events given values of probabilities
mstat105 Computing conditional probability using a two-way frequency table
mstat106 Computing conditional probability to make an inference using a two-way frequency table
mstat118 Conditional probability: Basic
mstat109 Using a Venn diagram to understand the addition rule for probability
mstat108 Outcomes and event probability: Addition rule
mstat032 Probability of the union of two events
mstat117 Probability of intersection or union: Word problems
stat174 Binomial problems: Basic
stat155 Binomial problems: Advanced
mstat085 Identifying outcomes in a random number table used to simulate a compound event
mstat086 Using a random number table to simulate a compound event
mstat114 Using a random number table to make a fair decision
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat082 Computing mean absolute deviation from a list of numerical values
stat021 Population standard deviation

stat852 Word problem involving calculations from a normal distribution
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom395 Midpoint of a number line segment: Integers
 alge191 Midpoint of a line segment in the plane
 pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 geom494 Deriving the equation of a parabola given its focus and directrix
 pcalc068 Writing an equation of a parabola given the vertex and the focus
 pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 pcalc734 Graphing an ellipse given its equation in standard form
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$
 pcalc071 Graphing an ellipse given its equation in general form
 pcalc072 Finding the foci of an ellipse given its equation in general form
 pcalc074 Writing an equation of an ellipse given the center, an endpoint of an axis, and the length of the other axis
 pcalc735 Graphing a hyperbola given its equation in standard form
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 pcalc076 Graphing a hyperbola given its equation in general form
 pcalc077 Finding the foci of a hyperbola given its equation in general form
 pcalc078 Writing an equation of a hyperbola given the foci and the vertices
 pcalc736 Classifying conics given their equations
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 pcalc796 Using a graphing calculator to solve a system of equations
 pcalc098 Solving a system of nonlinear equations: Problem type 1
 pcalc096 Graphing a system of nonlinear inequalities: Problem type 1
 pcalc097 Graphing a system of nonlinear inequalities: Problem type 2

Trigonometry

pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle
 pcalc001 Converting degrees-minutes-seconds to decimal degrees
 pcalc661 Converting a decimal degree to degrees-minutes-seconds
 pcalc002 Converting between degree and radian measure: Problem type 1
 pcalc621 Converting between degree and radian measure: Problem type 2

pcalc006 Sketching an angle in standard position
pcalc622 Coterminal angles
pcalc005 Arc length and central angle measure
geom126 Area of a sector of a circle: Exact answer in terms of pi
pcalc623 Area of a sector of a circle
pcalc627 Finding coordinates on the unit circle for special angles
pcalc629 Trigonometric functions and special angles: Problem type 1
pcalc628 Finding trigonometric ratios from a point on the unit circle
pcalc630 Trigonometric functions and special angles: Problem type 2
pcalc631 Trigonometric functions and special angles: Problem type 3
pcalc626 Reference angles: Problem type 1
pcalc632 Reference angles: Problem type 2
pcalc671 Determining the location of a terminal point given the signs of trigonometric values
pcalc011 Finding values of trigonometric functions given information about an angle: Problem type 1
pcalc012 Finding values of trigonometric functions given information about an angle: Problem type 2
pcalc013 Finding values of trigonometric functions given information about an angle: Problem type 3
pcalc016 Values of inverse trigonometric functions
pcalc031 Solving a triangle with the law of sines: Problem type 1
pcalc032 Solving a triangle with the law of sines: Problem type 2
pcalc644 Solving a word problem using the law of sines
geom320 Proving the law of sines
pcalc033 Solving a triangle with the law of cosines
pcalc645 Solving a word problem using the law of cosines
geom409 Proving the law of cosines
geom439 Using trigonometry to find the area of a right triangle
pcalc646 Finding the area of a triangle using trigonometry
geom319 Expressing the area of a triangle in terms of the sine of one of its angles
pcalc647 Heron's formula
pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
pcalc014 Sketching the graph of $y = a \sin(bx+c)$ or $y = a \cos(bx+c)$
pcalc633 Amplitude and period of sine and cosine functions
pcalc634 Amplitude, period, and phase shift of sine and cosine functions
pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1
pcalc636 Writing the equation of a sine or cosine function given its graph: Problem type 2
pcalc640 Word problem involving a sine or cosine function: Problem type 1
pcalc641 Word problem involving a sine or cosine function: Problem type 2
pcalc637 Matching graphs and equations for secant, cosecant, tangent, and cotangent functions
pcalc017 Sketching the graph of a secant or cosecant function: Problem type 1
pcalc638 Sketching the graph of a secant or cosecant function: Problem type 2
pcalc105 Sketching the graph of a tangent or cotangent function: Problem type 1
pcalc015 Sketching the graph of a tangent or cotangent function: Problem type 2
pcalc648 Simplifying trigonometric expressions
pcalc666 Using cofunction identities
pcalc110 Verifying a trigonometric identity
pcalc034 Proving trigonometric identities: Problem type 1
pcalc404 Proving trigonometric identities: Problem type 2
pcalc405 Proving trigonometric identities: Problem type 3
pcalc406 Proving trigonometric identities using odd and even properties
pcalc029 Sum and difference identities: Problem type 1
pcalc663 Sum and difference identities: Problem type 2
pcalc664 Sum and difference identities: Problem type 3
pcalc403 Proving trigonometric identities using sum and difference properties
pcalc030 Double-angle identities: Problem type 1
pcalc667 Double-angle identities: Problem type 2
pcalc662 Half-angle identities: Problem type 1
pcalc665 Half-angle identities: Problem type 2
pcalc402 Proving trigonometric identities using double-angle properties
pcalc650 Finding solutions in an interval for a basic equation involving sine or cosine
pcalc651 Finding solutions in an interval for a basic tangent, cotangent, secant, or cosecant equation
pcalc660 Solving a basic trigonometric equation using a calculator
pcalc020 Solving a basic trigonometric equation involving sine or cosine

pcalc021 Solving a basic trigonometric equation involving tangent, cotangent, secant, or cosecant
 pcalc670 Finding solutions in an interval for a trigonometric equation in factored form
 pcalc652 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 1
 pcalc653 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 2
 pcalc654 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 1
 pcalc657 Finding solutions in an interval for an equation with sine and cosine using double-angle identities
 pcalc668 Solving a trigonometric equation modeling a real-world situation
 pcalc811 Using a graphing calculator to solve a trigonometric equation
 pcalc022 Solving a trigonometric equation involving a squared function: Problem type 1
 pcalc023 Solving a trigonometric equation involving a squared function: Problem type 2
 pcalc024 Solving a trigonometric equation involving more than one function
 pcalc027 Solving a trigonometric equation using double-angle identities
 pcalc060 Magnitude of a vector given in component form
 geom858 Scalar multiplication of a vector: Geometric Approach
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 pcalc063 Translation of a vector
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph
 vector009 Dot product of vectors given in component form
 vector010 Using the dot product to find perpendicular vectors
 pcalc730 Finding the angle between two vectors given in component form

Segments, Angles, and Triangles

geom459 Analyzing relationships between points, lines, and planes given a figure
 geom407 Matching basic geometric terms with their definitions
 geom394 Computing distances between decimals on a number line
 geom393 Finding a point on a number line given the length of a segment and another point
 geom396 Midpoint of a number line segment: Decimals
 geom397 Using a segment's midpoint and endpoint to locate the other endpoint
 geom521 Segment addition and midpoints
 geom399 Finding a point that partitions a number line segment in a given fractional relationship
 geom390 Finding a point that partitions a number line segment in a given ratio
 geom458 Identifying congruent segments in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 geom406 Finding a point that partitions a segment in the plane in a given fractional relationship
 geom391 Finding a point that partitions a segment in the plane in a given ratio
 geom152 Drawing an angle with the protractor
 geom552 Solving an equation involving complementary or supplementary angles
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom800 Identifying linear pairs and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom500 Solving equations involving vertical angles and linear pairs
 geom389 Constructing congruent line segments
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom154 Constructing the perpendicular bisector of a line segment
 geom457 Making conjectures given a geometric construction
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic011 Writing the converse, inverse, and contrapositive of a conditional statement and determining their truth values
 glogic012 Writing a biconditional statement as a conditional statement and its converse and determining truth values

glogic013 Finding counterexamples to conjectures
glogic008 Conditional statements and deductive reasoning
geom665 Distinguishing between undefined terms, definitions, postulates, conjectures, and theorems
geom616 Introduction to proofs: Justifying statements
geom614 Proofs involving segment congruence
geom611 Proofs involving angle congruence
geom304 Identifying corresponding and alternate angles
geom554 Finding angle measures given two parallel lines cut by a transversal
geom531 Solving equations involving angles and a pair of parallel lines
geom503 Solving equations involving angles and two pairs of parallel lines
geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
geom150 Constructing a pair of perpendicular lines
geom157 Constructing a pair of parallel lines
geom835 Introduction to proofs involving parallel lines
geom836 Proofs involving parallel lines
geom626 Classifying scalene, isosceles, and equilateral triangles by side lengths
geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
geom322 Identifying coordinates that give right triangles
geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
geom908 Finding an angle measure for a triangle with an extended side
geom812 Finding an angle measure given extended triangles
geom813 Finding an angle measure given a triangle and parallel lines
geom628 Finding angle measures of a triangle given angles with variables
geom586 Establishing facts about the interior angles of a triangle
geom587 Establishing facts about the interior and exterior angles of a triangle
geom357 Identifying transformations
geom325 Determining if figures are related by rigid motions
geom327 Examining triangle congruence in terms of rigid motion
geom329 Exploring the triangle congruence theorems
geom418 Completing proofs involving congruent triangles using SSS or SAS
geom420 Introduction to proving triangles congruent using SSS or SAS
geom520 Identifying and naming congruent triangles
geom419 Completing proofs involving congruent triangles using ASA or AAS
geom421 Introduction to proving triangles congruent using ASA or AAS
geom837 Proofs involving congruent triangles and segment or angle bisectors
geom647 Separating overlapping triangles and identifying common features
geom840 Proofs involving congruent triangles that overlap: Basic
geom423 Proofs involving congruent triangles with parallel or perpendicular segments
geom424 Determining when to apply the HL congruence property
geom425 Introduction to proving triangles congruent using the HL property
geom422 Introduction to proofs involving congruent triangles and CPCTC
geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
geom843 Proofs involving congruent triangles that overlap: Advanced
geom645 Finding side lengths and angle measures of isosceles and equilateral triangles
geom309 Finding an angle measure for a triangle sharing a side with another triangle
geom629 Finding angle measures of an isosceles triangle given angles with variables
geom363 Proofs of theorems involving isosceles triangles
geom862 Using the Pythagorean Theorem repeatedly
alge675 Using the Pythagorean Theorem to find distance on a grid
geom603 Identifying side lengths that give right triangles
geom589 Demonstrating the converse of the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom449 Classifying segments inside triangles
geom446 Using the circumcenter of a triangle to find segment lengths
geom447 Using the incenter of a triangle to find segment lengths and angle measures
geom448 Using the centroid of a triangle to find segment lengths
geom413 Introduction to the triangle midsegment theorem
geom324 Proving the triangle midsegment theorem in the coordinate plane
geom441 Proof involving points on the perpendicular bisector of a line segment
geom544 Creating triangles from given side lengths: Problem type 1
geom634 Creating triangles from given side lengths: Problem type 2
geom844 Using triangle inequality to determine if side lengths form a triangle

geom664 Using triangle inequality to determine possible lengths of a third side
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom543 Drawing a circle with a given radius or diameter
 geom545 Drawing triangles with given side lengths using a compass
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom451 Using the hinge theorem
 geom650 Indirect proof (proof by contradiction)

Polygons, Similarity, and Transformations

geom361 Naming polygons
 geom870 Sum of the angle measures of a quadrilateral
 geom656 Finding the sum of the interior angle measures of a convex polygon given the number of sides
 geom655 Finding the number of sides of a convex polygon given the sum of the measures of the interior angles
 geom657 Finding a missing interior angle measure in a convex polygon
 geom658 Finding the measures of an interior angle and an exterior angle of a regular polygon
 geom659 Finding the number of sides of a regular polygon given the measure of an interior angle
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom436 Finding angle measures involving diagonals of a rhombus
 geom523 Conditions for quadrilaterals
 geom661 Completing proofs of theorems involving sides of a parallelogram
 geom662 Completing proofs of theorems involving angles of a parallelogram
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom818 Finding the coordinates of a point to make a parallelogram
 geom819 Finding coordinates of vertices of polygons
 geom321 Proving that a quadrilateral with given vertices is a parallelogram
 geom408 Classifying parallelograms in the coordinate plane
 geom863 Congruence in the coordinate plane
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom475 Triangles and angle bisectors
 geom326 Determining if figures are related by similarity transformations
 geom328 Examining triangle similarity in terms of similarity transformations
 geom364 Identifying and naming similar triangles
 geom365 Proofs involving similar triangles
 geom472 Completing proofs involving the triangle proportionality theorem
 geom461 Proving the slope criterion for parallel or perpendicular lines
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 geom452 Identifying similar right triangles that overlap
 alge814 Using right triangles to find the slope of a line
 geom507 Right triangles and geometric mean
 geom473 Proving the Pythagorean Theorem using similar triangles
 geom860 Special right triangles: Decimal answers
 geom506 Special right triangles: Exact answers
 geom596 Translating a point and giving its coordinates: One step

geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom375 Understanding the definition of a translation
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom376 Understanding the definition of a reflection
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom377 Understanding the definition of a rotation
 geom334 Drawing lines of symmetry
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom831 Rotational and point symmetries
 geom369 Writing a rule to describe a translation
 geom370 Writing a rule to describe a reflection
 geom371 Writing a rule to describe a rotation
 geom373 Identifying transformations that map a quadrilateral onto itself
 geom374 Identifying transformations that map a regular polygon onto itself
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom372 Writing a rule to describe a dilation
 geom582 Determining if figures are similar and related by a sequence of transformations
 geom463 Exploring similarity of circles
 geom379 Exploring the effect of dilation on lines

Area, Volume, and Circles

geom022 Area of a parallelogram
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom426 Finding the perimeter of a triangle, trapezoid, or parallelogram in the coordinate plane
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane
 geom440 Finding the area of a right triangle using the Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom023 Area of a trapezoid
 geom434 Area of a rhombus
 geom435 Finding the area of a rhombus using the Pythagorean Theorem
 geom438 Finding the area of a trapezoid, rhombus, or kite in the coordinate plane

geom213 Area of a regular polygon
geom479 Finding the area of a regular polygon using special right triangles
geom481 Side lengths, perimeters, and areas of similar polygons
geom218 Finding the radius or the diameter of a circle given its circumference
geom427 Informal argument for the formula of the circumference of a circle
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom570 Distinguishing between the area and circumference of a circle
geom428 Informal argument for the formula of the area of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom649 Area involving multiple inscribed figures
geom212 Circles inscribed in and circumscribed about regular polygons
geom429 Informal argument for the formula of the area of a sector
geom348 Vertices, edges, and faces of a solid
geom219 Nets of solids
geom861 Nets of solids: Advanced
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom491 Identifying properties of Euclidean and spherical geometries
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom578 Word problem involving the surface area of a cylinder
geom484 Word problem involving the surface area of rectangular prisms and cylinders
geom483 Word problem involving the surface area of rectangular prisms and pyramids
geom354 Volume of a rectangular prism made of unit cubes
geom555 Distinguishing between surface area and volume
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
geom865 Measuring the net of a solid to find surface area or volume
geom382 Volume of an oblique rectangular prism
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom035 Volume of a cylinder
geom385 Informal argument for the formula of the volume of a cylinder
geom383 Volume of an oblique cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom388 Word problem on density involving the volume of a cylindrical solid
geom384 Using cross sections to identify solids with the same volume
geom133 Ratio of volumes
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom842 Surface area of a sphere
geom841 Volume of a sphere

geom574 Word problem involving the volume of a sphere
 geom488 Identifying similar solids
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom489 Computing side length, surface area, and volume for similar solids
 geom654 Informal argument for the formula of the volume of a cone
 geom490 Word problem involving volumes of similar solids
 geom464 Identifying chords, secants, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom470 Constructing a tangent of a circle
 geom465 Naming and finding measures of central angles, inscribed angles, and arcs of a circle
 geom467 Applying properties of radii, diameters, and chords
 geom466 Arc length
 geom805 Arc length and area of a sector of a circle
 geom653 Computing ratios of arc lengths to radii and describing the result
 geom468 Central angles and inscribed angles of a circle
 geom469 Central angles and angles involving chords and tangents of a circle
 geom666 Inscribed angles in relation to a diameter or a polygon inscribed in a circle
 geom667 Inscribed angles and angles involving chords and tangents of a circle
 geom492 Establishing facts about a quadrilateral inscribed in a circle
 geom312 Inscribing an equilateral triangle or a regular hexagon in a circle
 geom313 Inscribing a square in a circle
 geom314 Inscribing a circle in a triangle
 geom315 Circumscribing a circle about a triangle
 geom567 Angles of intersecting secants and tangents
 geom568 Lengths of chords, secants, and tangents

B.40 GPS Integrated H.S. Math I

Arithmetic Readiness

arith123 Rounding to hundreds or thousands
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 arith658 Filling in missing operations to make an equation
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith663 Writing ratios for real-world situations
 arith064 Solving a word problem on proportions using a unit rate
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication

arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith697 Mixed arithmetic operations with fractions
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith020 Mixed number multiplication: Problem type 1
 arith068 Mixed number division
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith221 Rounding decimals
 arith608 Ordering decimals
 arith609 Ordering fractions and decimals
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith013 Decimal addition with 3 numbers
 arith625 Subtraction of aligned decimals
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith017 Multiplication of a decimal by a whole number
 arith082 Multiplication of a decimal by a power of ten
 arith055 Decimal multiplication: Problem type 1
 arith081 Division of a decimal by a whole number
 arith083 Division of a decimal by a power of ten
 arith226 Converting between percentages and decimals
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith090 Converting a percentage to a fraction in simplest form
 arith069 Writing a ratio as a percentage without a calculator
 mstat049 Computing a percentage from a table of values
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 mstat034 Measuring length to the nearest quarter or half inch
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius

Real Numbers

arith699 Writing a signed number for a real-world situation
 mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith691 Ordering integers

arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith118 Order of operations with integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression
 alge187 Properties of addition
 alge188 Properties of real numbers

Linear Equations and Inequalities

alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge740 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators

alge742 Solving equations with zero, one, or infinitely many solutions
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge602 Writing a one-step variable expression for a real-world situation
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge207 Solving a linear inequality: Problem type 4
 alge745 Solving a linear inequality: Problem type 5
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge748 Writing an inequality for a real-world situation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge270 Solving an absolute value equation of the form $a - x = b$ or $-x + a = b$
 alge103 Solving an absolute value equation of the form $-ax + b = c$
 alge170 Solving an absolute value inequality: Basic

Lines and Systems of Linear Equations

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x- and y-intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced

alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge079 Graphing a system of two linear inequalities: Basic
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices

Exponents, Polynomials, and Quadratics

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 arith029 Ordering numbers with positive exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge758 Degree and leading coefficient of a univariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge764 Multiplying conjugate binomials: Univariate
 alge765 Multiplying binomials in two variables
 alge032 Squaring a binomial: Univariate
 alge180 Multiplication involving binomials and trinomials in two variables

alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge043 Factoring a perfect square trinomial
 alge040 Factoring a quadratic with leading coefficient greater than 1
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge624 Factoring a difference of squares
 alge038 Factoring a polynomial by grouping: Problem type 1
 alge181 Factoring a polynomial by grouping: Problem type 2
 alge681 Solving an equation written in factored form
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge252 Graphing a parabola of the form $y = ax^2$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 alge702 Classifying the graph of a function
 alge723 How the leading coefficient affects the shape of a parabola

Functions and Sequences

set004 Set builder and interval notation
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 pcalc768 Finding the average rate of change of a function
 fun019 Sum, difference, and product of two functions
 fun022 Composition of two functions: Basic
 fun002 Graphing integer functions
 pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 pcalc114 Even and odd functions: Problem type 1
 alge185 Writing an equation for a function after a vertical translation

fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge807 Finding the next terms of a sequence with whole numbers
 alge732 Finding patterns in shapes
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest

Rational and Radical Expressions

alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax, bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a, x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge272 Solving a proportion of the form $x/a = b/c$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a, x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation
 alge772 Word problem on combined variation
 alge213 Domain of a square root function
 pcalc781 Graphing a square root function

arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals

Perimeter, Area, and Volume

geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alge724 Finding an area in terms of variables
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom805 Arc length and area of a sector of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom830 Counting the cubes in a solid made of cubes
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism

geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of π
 geom841 Volume of a sphere
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom348 Vertices, edges, and faces of a solid
 geom816 Side views of a solid made of cubes
 geom031 Surface area of a cube or a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of π
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders

Lines, Angles, and Triangles

mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic008 Conditional statements and deductive reasoning
 geom349 Naming segments, rays, and lines
 geom525 Computing distances between decimals on the number line
 geom526 Midpoint of a number line segment
 geom521 Segment addition and midpoints
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom358 Identifying parallel and perpendicular lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 geom154 Constructing the perpendicular bisector of a line segment
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom304 Identifying corresponding and alternate angles
 geom305 Identifying supplementary and vertical angles
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom611 Proofs involving angle congruence
 geom159 Constructing congruent angles
 geom158 Constructing an angle bisector
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom845 Using triangle inequality to determine possible lengths of a third side
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles

geom044 Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom506 Special right triangles: Exact answers
 geom212 Circles inscribed in and circumscribed about regular polygons
 geom520 Identifying and naming congruent triangles
 geom617 Proofs involving congruent triangles and vertical angles or the reflexive property
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom650 Indirect proof (proof by contradiction)
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc033 Solving a triangle with the law of cosines
 pcalc060 Magnitude of a vector given in component form
 pcalc063 Translation of a vector
 geom858 Scalar multiplication of a vector: Geometric Approach
 geom857 Vector addition: Geometric approach
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph

Polygons, Circles, and Similarity

alge191 Midpoint of a line segment in the plane
 alge132 Distance between two points in the plane: Exact answers
 geom310 Properties of quadrilaterals
 geom523 Conditions for quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom834 Finding measures involving diagonals of rhombi
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon
 geom853 Interior and exterior angle measures in a regular polygon
 geom819 Finding coordinates of vertices of polygons
 geom818 Finding the coordinates of a point to make a parallelogram
 geom863 Congruence in the coordinate plane
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom511 Lengths of chords, secants, and tangents
 geom514 Inscribed angles of a circle
 geom512 Central angles and inscribed angles of a circle
 geom513 Angles of intersecting secants and tangents
 pcalc605 Graphing a circle given its equation in standard form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid

geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom507 Right triangles and geometric mean
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2
 geom357 Identifying transformations
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom335 Rotating a figure about the origin
 geom815 Finding an angle of rotation
 geom831 Rotational and point symmetries
 geom336 Dilating a figure

Statistics and Probability

mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 mstat006 Constructing a box-and-whisker plot
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 geom814 Angle measure in a circle graph
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 mstat066 Weighted mean
 mstat025 Finding if a question can be answered by the data
 stat802 Rejecting unreasonable claims based on average statistics
 stat805 Making a reasonable inference based on proportion statistics
 stat021 Population standard deviation
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.41 Algebra 2

Real Numbers and Linear Equations

arith691 Ordering integers
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith108 Integer addition: Problem type 2
 arith107 Integer subtraction
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith105 Signed fraction multiplication: Advanced
 arith118 Order of operations with integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 alge790 Evaluating expressions with exponents of zero
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge059 Ordering fractions with variables
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression
 alge187 Properties of addition
 alge188 Properties of real numbers
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge008 Multiplicative property of equality with whole numbers
 alge740 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators

alge742 Solving equations with zero, one, or infinitely many solutions
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge602 Writing a one-step variable expression for a real-world situation
 alge016 Translating a sentence into a one-step equation
 alge291 Translating a phrase into a two-step expression
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 stat801 Computations from a circle graph
 mstat049 Computing a percentage from a table of values
 arith232 Finding simple interest without a calculator
 stat803 Finding the value for a new score that will yield a given mean
 alge015 Translating a sentence by using an inequality symbol
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge207 Solving a linear inequality: Problem type 4
 alge745 Solving a linear inequality: Problem type 5
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge747 Solving a compound linear inequality: Interval notation
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge270 Solving an absolute value equation of the form $a-x = b$ or $-x+a = b$
 alge103 Solving an absolute value equation of the form $-ax+b = c$
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 alge170 Solving an absolute value inequality: Basic
 alge169 Solving an absolute value inequality: Advanced
 geom044 Pythagorean Theorem
 geom300 Perimeter of a square or a rectangle
 geom078 Sides of polygons having the same perimeter
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom019 Area of a square or a rectangle
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom801 Area of a triangle
 geom802 Circumference and area of a circle
 geom838 Circumference ratios
 geom036 Word problem involving the area between two concentric circles
 geom311 Volume of a rectangular prism
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom133 Ratio of volumes

geom031 Surface area of a cube or a rectangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom500 Solving equations involving vertical angles and linear pairs
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom037 Similar polygons
 geom337 Indirect measurement

Lines and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x- and y-intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 set001 Set builder notation
 set004 Set builder and interval notation
 set002 Union and intersection of finite sets
 set005 Union and intersection of intervals
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun030 Evaluating a piecewise-defined function
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc757 Determining whether an equation defines a function: Advanced
 pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis

pcalc772 Transforming the graph of a function by shrinking or stretching
 pcalc773 Transforming the graph of a function using more than one transformation
 alge252 Graphing a parabola of the form $y = ax^2$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge168 Graphing an absolute value equation in the plane: Advanced
 fun031 Graphing a piecewise-defined function: Problem type 1
 mstat051 Choosing a graph to fit a narrative: Advanced

Systems of Linear Equations and Matrices

alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge077 Creating an inconsistent system of linear equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge079 Graphing a system of two linear inequalities: Basic
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc095 Linear programming
 pcalc094 Solving a word problem using linear programming
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc039 Multiplication of matrices: Basic
 pcalc710 Multiplication of matrices: Advanced
 pcalc042 Finding the determinant of a 2x2 matrix
 pcalc043 Finding the determinant of a 3x3 matrix
 pcalc040 Finding the inverse of a 2x2 matrix
 pcalc045 Using Cramer's rule to solve a 2x2 system of linear equations
 pcalc047 Using Cramer's rule to solve a 3x3 system of linear equations
 pcalc711 Using the inverse of a matrix to solve a 3x3 system of linear equations
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 pcalc046 Solving a system of linear equations given its augmented matrix

Exponents and Polynomial Expressions

alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge028 Product rule with negative exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge757 Power, product, and quotient rules with negative exponents

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge764 Multiplying conjugate binomials: Univariate
 alge765 Multiplying binomials in two variables
 alge032 Squaring a binomial: Univariate
 alge180 Multiplication involving binomials and trinomials in two variables
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge043 Factoring a perfect square trinomial
 alge040 Factoring a quadratic with leading coefficient greater than 1
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge624 Factoring a difference of squares
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge038 Factoring a polynomial by grouping: Problem type 1
 alge181 Factoring a polynomial by grouping: Problem type 2

Quadratic and Polynomial Functions

alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge163 Writing a quadratic equation given the roots and the leading coefficient
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge193 Discriminant of a quadratic equation with parameter
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 pcalc762 Range of a quadratic function
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge723 How the leading coefficient affects the shape of a parabola
 pcalc680 Writing the equation of a quadratic function given its graph
 alge784 Solving a quadratic inequality written in factored form
 alge771 Solving a quadratic inequality
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate

alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 pcalc117 Synthetic division
 pcalc786 Using the remainder theorem to evaluate a polynomial
 pcalc787 The Factor Theorem
 alge681 Solving an equation written in factored form
 alge046 Roots of a product of polynomials
 pcalc764 Finding zeros of a polynomial function written in factored form
 pcalc766 Finding a polynomial of a given degree with given zeros: Real zeros
 pcalc758 Finding all possible rational zeros using the rational zeros theorem: Problem type 1
 pcalc759 Finding all possible rational zeros using the rational zeros theorem: Problem type 2
 pcalc743 Using the rational zeros theorem to find all zeros of a polynomial: Rational zeros
 pcalc744 Using the rational zeros theorem to find all zeros of a polynomial: Irrational zeros
 pcalc788 Descartes' Rule of Signs
 alge778 Using i to rewrite square roots of negative numbers
 alge779 Simplifying a product and quotient involving square roots of negative numbers
 pcalc048 Adding or subtracting complex numbers
 pcalc049 Multiplying complex numbers
 pcalc050 Dividing complex numbers
 pcalc053 Simplifying a power of i
 pcalc051 Solving a quadratic equation with complex roots
 pcalc785 Multiplying expressions involving complex conjugates
 pcalc767 Finding a polynomial of a given degree with given zeros: Complex zeros
 pcalc745 Using the rational zeros theorem to find all zeros of a polynomial: Complex zeros
 pcalc705 Linear factors theorem and conjugate zeros theorem
 pcalc765 Finding x - and y -intercepts given a polynomial function
 pcalc782 Determining the end behavior of the graph of a polynomial function
 pcalc738 Inferring properties of a polynomial function from its graph
 pcalc783 Matching graphs with polynomial functions
 pcalc795 Using a graphing calculator to find zeros of a polynomial function
 pcalc794 Using a graphing calculator to find local extrema of a polynomial function
 pcalc704 Using a graphing calculator to solve a word problem involving a polynomial of degree 3
 pcalc115 Using a graphing calculator to solve a word problem involving a local extremum of a polynomial function

Radicals and Advanced Functions

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
 alge812 Converting between radical form and exponent form

alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge777 Solving an equation with a root index greater than 2
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge228 Solving an equation using the odd-root property: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 fun019 Sum, difference, and product of two functions
 alge786 Quotient of two functions: Basic
 fun022 Composition of two functions: Basic
 fun021 Composition of two functions: Domain and range
 alge129 Composition of two functions: Advanced
 fun011 Horizontal line test
 pcalc777 Determining whether two functions are inverses of each other
 fun012 Inverse functions: Linear, discrete
 alge130 Inverse functions: Rational
 pcalc778 Inverse functions: Quadratic, cubic, radical

Exponential and Logarithmic Functions

pcalc798 Evaluating an exponential function that models a real-world situation
 alge108 Converting between logarithmic and exponential equations
 pcalc799 Converting between natural logarithmic and exponential equations
 alge232 Evaluating a logarithmic expression
 pcalc708 Basic properties of logarithms
 alge787 Writing an expression as a single logarithm
 pcalc779 Expanding a logarithmic expression: Problem type 1
 pcalc780 Expanding a logarithmic expression: Problem type 2
 pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 alge233 Solving an equation of the form $\log_b a = c$
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 pcalc803 Solving a multi-step equation involving a single logarithm
 pcalc804 Solving a multi-step equation involving natural logarithms
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 alge112 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 alge789 Solving exponential equations by using logarithms and natural logarithms: Decimal answers
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc614 Finding the initial or final amount in a word problem on exponential growth or decay
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 pcalc797 The graph, domain, and range of an exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^{x-b} + c$
 alge788 Graphing a logarithmic function: Basic
 pcalc800 The graph, domain, and range of a logarithmic function
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc102 Translating the graph of a logarithmic or exponential function

Rational Expressions and Functions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge162 Complex fraction that contains a complex fraction
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge783 Solving a rational inequality: Problem type 1
 pcalc677 Solving a rational inequality: Problem type 2
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc790 Finding horizontal and vertical asymptotes of a rational function: Quadratic numerator or denominator
 pcalc108 Graphing a rational function: Constant or linear over linear
 pcalc109 Graphing a rational function: Quadratic over linear
 pcalc792 Graphing rational functions with holes
 pcalc791 Matching graphs with rational functions: Two vertical asymptotes
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation
 alge772 Word problem on combined variation

Conic Sections

alge191 Midpoint of a line segment in the plane
 alge132 Distance between two points in the plane: Exact answers
 pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc068 Writing an equation of a parabola given the vertex and the focus
 pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc605 Graphing a circle given its equation in standard form
 pcalc064 Graphing a circle given its equation in general form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$

pcalc734 Graphing an ellipse given its equation in standard form
 pcalc071 Graphing an ellipse given its equation in general form
 pcalc072 Finding the foci of an ellipse given its equation in general form
 pcalc074 Writing an equation of an ellipse given the center, an endpoint of an axis, and the length of the other axis
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 pcalc735 Graphing a hyperbola given its equation in standard form
 pcalc076 Graphing a hyperbola given its equation in general form
 pcalc077 Finding the foci of a hyperbola given its equation in general form
 pcalc078 Writing an equation of a hyperbola given the foci and the vertices
 pcalc736 Classifying conics given their equations
 pcalc098 Solving a system of nonlinear equations: Problem type 1
 pcalc796 Using a graphing calculator to solve a system of equations
 pcalc096 Graphing a system of nonlinear inequalities: Problem type 1
 pcalc097 Graphing a system of nonlinear inequalities: Problem type 2

Sequences and Probability

pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 pcalc715 Finding a specified term of an arithmetic sequence given two terms of the sequence
 pcalc717 Finding a specified term of a geometric sequence given two terms of the sequence
 pcalc718 Sum of the first n terms of an arithmetic sequence
 pcalc719 Sum of the first n terms of a geometric sequence
 pcalc720 Sum of an infinite geometric series
 mstat015 Counting principle
 pcalc082 Factorial expressions
 pcalc809 Introduction to permutations and combinations
 pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 pcalc090 Permutations and combinations: Problem type 3
 pcalc087 Binomial formula
 mstat010 Probability of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat046 Experimental and theoretical probability
 mstat011 Area as probability
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 stat114 Probability of intersection or union: Word problems
 stat115 Independent events: Basic
 stat120 Probability of union: Basic
 stat116 Conditional probability: Basic
 stat174 Binomial problems: Basic
 stat155 Binomial problems: Advanced
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat006 Constructing a box-and-whisker plot
 stat009 Percentiles
 stat021 Population standard deviation
 stat852 Word problem involving calculations from a normal distribution

Trigonometry

geom506 Special right triangles: Exact answers
pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
pcalc008 Finding trigonometric ratios given a right triangle
pcalc607 Using a trigonometric ratio to find a side length in a right triangle
pcalc610 Using trigonometry to find a length in a word problem with one right triangle
pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
pcalc642 Solving a right triangle
pcalc001 Converting degrees-minutes-seconds to decimal degrees
pcalc661 Converting a decimal degree to degrees-minutes-seconds
pcalc002 Converting between degree and radian measure: Problem type 1
pcalc621 Converting between degree and radian measure: Problem type 2
pcalc006 Sketching an angle in standard position
pcalc622 Coterminal angles
pcalc626 Reference angles: Problem type 1
pcalc632 Reference angles: Problem type 2
pcalc005 Arc length and central angle measure
pcalc623 Area of a sector of a circle
pcalc627 Finding coordinates on the unit circle for special angles
pcalc671 Determining the location of a terminal point given the signs of trigonometric values
pcalc629 Trigonometric functions and special angles: Problem type 1
pcalc630 Trigonometric functions and special angles: Problem type 2
pcalc631 Trigonometric functions and special angles: Problem type 3
pcalc011 Finding values of trigonometric functions given information about an angle: Problem type 1
pcalc012 Finding values of trigonometric functions given information about an angle: Problem type 2
pcalc013 Finding values of trigonometric functions given information about an angle: Problem type 3
pcalc031 Solving a triangle with the law of sines: Problem type 1
pcalc032 Solving a triangle with the law of sines: Problem type 2
pcalc644 Solving a word problem using the law of sines
pcalc033 Solving a triangle with the law of cosines
pcalc645 Solving a word problem using the law of cosines
pcalc646 Finding the area of a triangle using trigonometry
pcalc647 Heron's formula
pcalc633 Amplitude and period of sine and cosine functions
pcalc634 Amplitude, period, and phase shift of sine and cosine functions
pcalc640 Word problem involving a sine or cosine function: Problem type 1
pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1
pcalc636 Writing the equation of a sine or cosine function given its graph: Problem type 2
pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
pcalc014 Sketching the graph of $y = a \sin(bx+c)$ or $y = a \cos(bx+c)$
pcalc017 Sketching the graph of a secant or cosecant function: Problem type 1
pcalc638 Sketching the graph of a secant or cosecant function: Problem type 2
pcalc105 Sketching the graph of a tangent or cotangent function: Problem type 1
pcalc015 Sketching the graph of a tangent or cotangent function: Problem type 2
pcalc016 Values of inverse trigonometric functions
pcalc648 Simplifying trigonometric expressions
pcalc666 Using cofunction identities
pcalc029 Sum and difference identities: Problem type 1
pcalc663 Sum and difference identities: Problem type 2
pcalc664 Sum and difference identities: Problem type 3
pcalc030 Double-angle identities: Problem type 1
pcalc667 Double-angle identities: Problem type 2
pcalc662 Half-angle identities: Problem type 1
pcalc665 Half-angle identities: Problem type 2
pcalc110 Verifying a trigonometric identity
pcalc034 Proving trigonometric identities: Problem type 1
pcalc404 Proving trigonometric identities: Problem type 2
pcalc405 Proving trigonometric identities: Problem type 3
pcalc403 Proving trigonometric identities using sum and difference properties
pcalc402 Proving trigonometric identities using double-angle properties
pcalc650 Finding solutions in an interval for a basic equation involving sine or cosine

pcalc660 Solving a basic trigonometric equation using a calculator
 pcalc651 Finding solutions in an interval for a basic tangent, cotangent, secant, or cosecant equation
 pcalc670 Finding solutions in an interval for a trigonometric equation in factored form
 pcalc652 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 1
 pcalc653 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 2
 pcalc654 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 1
 pcalc657 Finding solutions in an interval for an equation with sine and cosine using double-angle identities
 pcalc668 Solving a trigonometric equation modeling a real-world situation
 pcalc811 Using a graphing calculator to solve a trigonometric equation
 pcalc020 Solving a basic trigonometric equation involving sine or cosine
 pcalc021 Solving a basic trigonometric equation involving tangent, cotangent, secant, or cosecant
 pcalc022 Solving a trigonometric equation involving a squared function: Problem type 1
 pcalc023 Solving a trigonometric equation involving a squared function: Problem type 2
 pcalc024 Solving a trigonometric equation involving more than one function
 pcalc027 Solving a trigonometric equation using double-angle identities
 pcalc060 Magnitude of a vector given in component form
 pcalc063 Translation of a vector
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 vector009 Dot product of vectors given in component form
 vector010 Using the dot product to find perpendicular vectors
 pcalc730 Finding the angle between two vectors given in component form

B.42 Algebra 2 with Trigonometry

Real Numbers and Linear Equations

arith691 Ordering integers
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith108 Integer addition: Problem type 2
 arith107 Integer subtraction
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith105 Signed fraction multiplication: Advanced
 arith118 Order of operations with integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 alge790 Evaluating expressions with exponents of zero
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge059 Ordering fractions with variables
 arith036 Scientific notation with positive exponent

arith037 Scientific notation with negative exponent
scinot002 Multiplying and dividing numbers written in scientific notation
alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge607 Combining like terms: Integer coefficients
alge663 Combining like terms: Advanced
alge293 Combining like terms in a quadratic expression
alge187 Properties of addition
alge188 Properties of real numbers
alge010 Additive property of equality with integers
alge266 Additive property of equality with a negative coefficient
alge008 Multiplicative property of equality with whole numbers
alge740 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge006 Solving a two-step equation with integers
alge208 Solving a two-step equation with signed fractions
alge824 Solving a two-step equation with signed decimals
alge200 Solving an equation to find the value of an expression
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge810 Introduction to algebraic symbol manipulation
alge743 Algebraic symbol manipulation: Problem type 1
alge744 Algebraic symbol manipulation: Problem type 2
alge602 Writing a one-step variable expression for a real-world situation
alge016 Translating a sentence into a one-step equation
alge291 Translating a phrase into a two-step expression
alge730 Writing a multi-step equation for a real-world situation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge014 Solving a word problem with two unknowns using a linear equation
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge218 Solving a word problem involving rates and time conversion
alge796 Solving a distance, rate, time problem using a linear equation
arith074 Finding the sale price without a calculator given the original price and percent discount
arith031 Finding the original price given the sale price and percent discount
arith225 Finding the percentage increase or decrease: Advanced
stat801 Computations from a circle graph
mstat049 Computing a percentage from a table of values
arith232 Finding simple interest without a calculator
stat803 Finding the value for a new score that will yield a given mean
alge015 Translating a sentence by using an inequality symbol
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge019 Solving a linear inequality: Problem type 1

alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge207 Solving a linear inequality: Problem type 4
 alge745 Solving a linear inequality: Problem type 5
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge747 Solving a compound linear inequality: Interval notation
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge270 Solving an absolute value equation of the form $a-x = b$ or $-x+a = b$
 alge103 Solving an absolute value equation of the form $-ax+b = c$
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 alge170 Solving an absolute value inequality: Basic
 alge169 Solving an absolute value inequality: Advanced
 geom044 Pythagorean Theorem
 geom300 Perimeter of a square or a rectangle
 geom078 Sides of polygons having the same perimeter
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom019 Area of a square or a rectangle
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom801 Area of a triangle
 geom802 Circumference and area of a circle
 geom838 Circumference ratios
 geom036 Word problem involving the area between two concentric circles
 geom311 Volume of a rectangular prism
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom133 Ratio of volumes
 geom031 Surface area of a cube or a rectangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom500 Solving equations involving vertical angles and linear pairs
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom037 Similar polygons
 geom337 Indirect measurement

Lines and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x- and y-intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points

geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 set001 Set builder notation
 set004 Set builder and interval notation
 set002 Union and intersection of finite sets
 set005 Union and intersection of intervals
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun030 Evaluating a piecewise-defined function
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc757 Determining whether an equation defines a function: Advanced
 pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 pcalc773 Transforming the graph of a function using more than one transformation
 alge252 Graphing a parabola of the form $y = ax^2$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge168 Graphing an absolute value equation in the plane: Advanced
 fun031 Graphing a piecewise-defined function: Problem type 1
 mstat051 Choosing a graph to fit a narrative: Advanced

Systems of Linear Equations and Matrices

alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge752 Solving a 2×2 system of linear equations that is inconsistent or consistent dependent
 alge077 Creating an inconsistent system of linear equations
 alge753 Solving a 3×3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3×3 system of linear equations: Problem type 1
 alge079 Graphing a system of two linear inequalities: Basic
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc095 Linear programming
 pcalc094 Solving a word problem using linear programming
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices

pcalc740 Linear combination of matrices
 pcalc039 Multiplication of matrices: Basic
 pcalc710 Multiplication of matrices: Advanced
 pcalc042 Finding the determinant of a 2x2 matrix
 pcalc043 Finding the determinant of a 3x3 matrix
 pcalc040 Finding the inverse of a 2x2 matrix
 pcalc045 Using Cramer's rule to solve a 2x2 system of linear equations
 pcalc047 Using Cramer's rule to solve a 3x3 system of linear equations
 pcalc711 Using the inverse of a matrix to solve a 3x3 system of linear equations
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 pcalc046 Solving a system of linear equations given its augmented matrix

Exponents and Polynomial Expressions

alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge028 Product rule with negative exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge757 Power, product, and quotient rules with negative exponents
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge764 Multiplying conjugate binomials: Univariate
 alge765 Multiplying binomials in two variables
 alge032 Squaring a binomial: Univariate
 alge180 Multiplication involving binomials and trinomials in two variables
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge043 Factoring a perfect square trinomial
 alge040 Factoring a quadratic with leading coefficient greater than 1
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge624 Factoring a difference of squares
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge038 Factoring a polynomial by grouping: Problem type 1
 alge181 Factoring a polynomial by grouping: Problem type 2

Quadratic and Polynomial Functions

alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1

alge211 Solving a quadratic equation needing simplification
alge781 Solving an equation that can be written in quadratic form: Problem type 1
alge163 Writing a quadratic equation given the roots and the leading coefficient
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
alge094 Completing the square
alge780 Solving a quadratic equation by completing the square: Exact answers
alge095 Applying the quadratic formula: Exact answers
alge214 Discriminant of a quadratic equation
alge193 Discriminant of a quadratic equation with parameter
alge703 Solving a word problem using a quadratic equation with rational roots
alge524 Solving a word problem using a quadratic equation with irrational roots
alge277 Finding the x-intercept(s) and the vertex of a parabola
pcalc774 Rewriting a quadratic function to find the vertex of its graph
pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
pcalc775 Finding the maximum or minimum of a quadratic function
alge785 Word problem involving the maximum or minimum of a quadratic function
pcalc762 Range of a quadratic function
alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
alge702 Classifying the graph of a function
alge723 How the leading coefficient affects the shape of a parabola
pcalc680 Writing the equation of a quadratic function given its graph
alge784 Solving a quadratic inequality written in factored form
alge771 Solving a quadratic inequality
pcalc748 Graphing a quadratic inequality: Problem type 1
pcalc749 Graphing a quadratic inequality: Problem type 2
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge763 Polynomial long division: Problem type 3
pcalc117 Synthetic division
pcalc786 Using the remainder theorem to evaluate a polynomial
pcalc787 The Factor Theorem
alge681 Solving an equation written in factored form
alge046 Roots of a product of polynomials
pcalc764 Finding zeros of a polynomial function written in factored form
pcalc766 Finding a polynomial of a given degree with given zeros: Real zeros
pcalc758 Finding all possible rational zeros using the rational zeros theorem: Problem type 1
pcalc759 Finding all possible rational zeros using the rational zeros theorem: Problem type 2
pcalc743 Using the rational zeros theorem to find all zeros of a polynomial: Rational zeros
pcalc744 Using the rational zeros theorem to find all zeros of a polynomial: Irrational zeros
pcalc788 Descartes' Rule of Signs
alge778 Using i to rewrite square roots of negative numbers
alge779 Simplifying a product and quotient involving square roots of negative numbers
pcalc048 Adding or subtracting complex numbers
pcalc049 Multiplying complex numbers
pcalc050 Dividing complex numbers
pcalc053 Simplifying a power of i
pcalc051 Solving a quadratic equation with complex roots
pcalc785 Multiplying expressions involving complex conjugates
pcalc767 Finding a polynomial of a given degree with given zeros: Complex zeros
pcalc745 Using the rational zeros theorem to find all zeros of a polynomial: Complex zeros
pcalc705 Linear factors theorem and conjugate zeros theorem
pcalc765 Finding x- and y-intercepts given a polynomial function
pcalc782 Determining the end behavior of the graph of a polynomial function
pcalc738 Inferring properties of a polynomial function from its graph
pcalc783 Matching graphs with polynomial functions
pcalc795 Using a graphing calculator to find zeros of a polynomial function
pcalc794 Using a graphing calculator to find local extrema of a polynomial function

pcalc704 Using a graphing calculator to solve a word problem involving a polynomial of degree 3
 pcalc115 Using a graphing calculator to solve a word problem involving a local extremum of a polynomial function

Radicals and Advanced Functions

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge777 Solving an equation with a root index greater than 2
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge228 Solving an equation using the odd-root property: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 fun019 Sum, difference, and product of two functions
 alge786 Quotient of two functions: Basic
 fun022 Composition of two functions: Basic
 fun021 Composition of two functions: Domain and range
 alge129 Composition of two functions: Advanced
 fun011 Horizontal line test
 pcalc777 Determining whether two functions are inverses of each other
 fun012 Inverse functions: Linear, discrete
 alge130 Inverse functions: Rational
 pcalc778 Inverse functions: Quadratic, cubic, radical

Exponential and Logarithmic Functions

pcalc798 Evaluating an exponential function that models a real-world situation
 alge108 Converting between logarithmic and exponential equations
 pcalc799 Converting between natural logarithmic and exponential equations
 alge232 Evaluating a logarithmic expression

pcalc708 Basic properties of logarithms
 alge787 Writing an expression as a single logarithm
 pcalc779 Expanding a logarithmic expression: Problem type 1
 pcalc780 Expanding a logarithmic expression: Problem type 2
 pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 alge233 Solving an equation of the form $\log_b a = c$
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 pcalc803 Solving a multi-step equation involving a single logarithm
 pcalc804 Solving a multi-step equation involving natural logarithms
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 alge112 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 alge789 Solving exponential equations by using logarithms and natural logarithms: Decimal answers
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc614 Finding the initial or final amount in a word problem on exponential growth or decay
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 pcalc797 The graph, domain, and range of an exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^x - b + c$
 alge788 Graphing a logarithmic function: Basic
 pcalc800 The graph, domain, and range of a logarithmic function
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc102 Translating the graph of a logarithmic or exponential function

Rational Expressions and Functions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge162 Complex fraction that contains a complex fraction
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge271 Solving a proportion of the form $\frac{a}{x+b} = \frac{c}{x}$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced

alge783 Solving a rational inequality: Problem type 1
 pcalc677 Solving a rational inequality: Problem type 2
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc790 Finding horizontal and vertical asymptotes of a rational function: Quadratic numerator or denominator
 pcalc108 Graphing a rational function: Constant or linear over linear
 pcalc109 Graphing a rational function: Quadratic over linear
 pcalc792 Graphing rational functions with holes
 pcalc791 Matching graphs with rational functions: Two vertical asymptotes
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation
 alge772 Word problem on combined variation

Conic Sections

alge191 Midpoint of a line segment in the plane
 alge132 Distance between two points in the plane: Exact answers
 pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc068 Writing an equation of a parabola given the vertex and the focus
 pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc605 Graphing a circle given its equation in standard form
 pcalc064 Graphing a circle given its equation in general form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$
 pcalc734 Graphing an ellipse given its equation in standard form
 pcalc071 Graphing an ellipse given its equation in general form
 pcalc072 Finding the foci of an ellipse given its equation in general form
 pcalc074 Writing an equation of an ellipse given the center, an endpoint of an axis, and the length of the other axis
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 pcalc735 Graphing a hyperbola given its equation in standard form
 pcalc076 Graphing a hyperbola given its equation in general form
 pcalc077 Finding the foci of a hyperbola given its equation in general form
 pcalc078 Writing an equation of a hyperbola given the foci and the vertices
 pcalc736 Classifying conics given their equations
 pcalc098 Solving a system of nonlinear equations: Problem type 1
 pcalc796 Using a graphing calculator to solve a system of equations
 pcalc096 Graphing a system of nonlinear inequalities: Problem type 1
 pcalc097 Graphing a system of nonlinear inequalities: Problem type 2

Sequences and Probability

pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 pcalc715 Finding a specified term of an arithmetic sequence given two terms of the sequence
 pcalc717 Finding a specified term of a geometric sequence given two terms of the sequence
 pcalc718 Sum of the first n terms of an arithmetic sequence
 pcalc719 Sum of the first n terms of a geometric sequence
 pcalc720 Sum of an infinite geometric series
 mstat015 Counting principle
 pcalc082 Factorial expressions
 pcalc809 Introduction to permutations and combinations

pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 pcalc090 Permutations and combinations: Problem type 3
 pcalc087 Binomial formula
 mstat010 Probability of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat046 Experimental and theoretical probability
 mstat011 Area as probability
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 stat114 Probability of intersection or union: Word problems
 stat115 Independent events: Basic
 stat120 Probability of union: Basic
 stat116 Conditional probability: Basic
 stat174 Binomial problems: Basic
 stat155 Binomial problems: Advanced
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat006 Constructing a box-and-whisker plot
 stat009 Percentiles
 stat021 Population standard deviation
 stat852 Word problem involving calculations from a normal distribution

Trigonometry

geom506 Special right triangles: Exact answers
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc008 Finding trigonometric ratios given a right triangle
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle
 pcalc001 Converting degrees-minutes-seconds to decimal degrees
 pcalc661 Converting a decimal degree to degrees-minutes-seconds
 pcalc002 Converting between degree and radian measure: Problem type 1
 pcalc621 Converting between degree and radian measure: Problem type 2
 pcalc006 Sketching an angle in standard position
 pcalc622 Coterminal angles
 pcalc626 Reference angles: Problem type 1
 pcalc632 Reference angles: Problem type 2
 pcalc005 Arc length and central angle measure
 pcalc623 Area of a sector of a circle
 pcalc627 Finding coordinates on the unit circle for special angles
 pcalc671 Determining the location of a terminal point given the signs of trigonometric values
 pcalc629 Trigonometric functions and special angles: Problem type 1
 pcalc630 Trigonometric functions and special angles: Problem type 2
 pcalc631 Trigonometric functions and special angles: Problem type 3
 pcalc011 Finding values of trigonometric functions given information about an angle: Problem type 1
 pcalc012 Finding values of trigonometric functions given information about an angle: Problem type 2
 pcalc013 Finding values of trigonometric functions given information about an angle: Problem type 3
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 pcalc033 Solving a triangle with the law of cosines

pcalc645 Solving a word problem using the law of cosines
 pcalc646 Finding the area of a triangle using trigonometry
 pcalc647 Heron's formula
 pcalc633 Amplitude and period of sine and cosine functions
 pcalc634 Amplitude, period, and phase shift of sine and cosine functions
 pcalc640 Word problem involving a sine or cosine function: Problem type 1
 pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1
 pcalc636 Writing the equation of a sine or cosine function given its graph: Problem type 2
 pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
 pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
 pcalc014 Sketching the graph of $y = a \sin(bx+c)$ or $y = a \cos(bx+c)$
 pcalc017 Sketching the graph of a secant or cosecant function: Problem type 1
 pcalc638 Sketching the graph of a secant or cosecant function: Problem type 2
 pcalc105 Sketching the graph of a tangent or cotangent function: Problem type 1
 pcalc015 Sketching the graph of a tangent or cotangent function: Problem type 2
 pcalc016 Values of inverse trigonometric functions
 pcalc648 Simplifying trigonometric expressions
 pcalc666 Using cofunction identities
 pcalc029 Sum and difference identities: Problem type 1
 pcalc663 Sum and difference identities: Problem type 2
 pcalc664 Sum and difference identities: Problem type 3
 pcalc030 Double-angle identities: Problem type 1
 pcalc667 Double-angle identities: Problem type 2
 pcalc662 Half-angle identities: Problem type 1
 pcalc665 Half-angle identities: Problem type 2
 pcalc110 Verifying a trigonometric identity
 pcalc034 Proving trigonometric identities: Problem type 1
 pcalc404 Proving trigonometric identities: Problem type 2
 pcalc405 Proving trigonometric identities: Problem type 3
 pcalc403 Proving trigonometric identities using sum and difference properties
 pcalc402 Proving trigonometric identities using double-angle properties
 pcalc650 Finding solutions in an interval for a basic equation involving sine or cosine
 pcalc660 Solving a basic trigonometric equation using a calculator
 pcalc651 Finding solutions in an interval for a basic tangent, cotangent, secant, or cosecant equation
 pcalc670 Finding solutions in an interval for a trigonometric equation in factored form
 pcalc652 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 1
 pcalc653 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 2
 pcalc654 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 1
 pcalc657 Finding solutions in an interval for an equation with sine and cosine using double-angle identities
 pcalc668 Solving a trigonometric equation modeling a real-world situation
 pcalc811 Using a graphing calculator to solve a trigonometric equation
 pcalc020 Solving a basic trigonometric equation involving sine or cosine
 pcalc021 Solving a basic trigonometric equation involving tangent, cotangent, secant, or cosecant
 pcalc022 Solving a trigonometric equation involving a squared function: Problem type 1
 pcalc023 Solving a trigonometric equation involving a squared function: Problem type 2
 pcalc024 Solving a trigonometric equation involving more than one function
 pcalc027 Solving a trigonometric equation using double-angle identities
 pcalc060 Magnitude of a vector given in component form
 pcalc063 Translation of a vector
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 vector009 Dot product of vectors given in component form
 vector010 Using the dot product to find perpendicular vectors
 pcalc730 Finding the angle between two vectors given in component form

B.43 PreCalculus

Algebra and Geometry Review

arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith602 Estimating a square root
arith712 Ordering real numbers
alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
mstat065 Converting between temperatures in Fahrenheit and Celsius
alge187 Properties of addition
alge188 Properties of real numbers
alge604 Distributive property: Integer coefficients
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge821 Understanding the product rule of exponents
alge024 Introduction to the product rule of exponents
alge311 Product rule with positive exponents: Univariate
alge030 Product rule with positive exponents: Multivariate
arith029 Ordering numbers with positive exponents
alge826 Understanding the power rules of exponents
alge306 Introduction to the power of a power rule of exponents
alge305 Introduction to the power of a product rule of exponents
alge307 Power rules with positive exponents: Multivariate products
alge308 Power rules with positive exponents: Multivariate quotients
alge756 Power and product rules with positive exponents
alge451 Simplifying a ratio of multivariate monomials: Basic
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
alge453 Simplifying a ratio of multivariate monomials: Advanced
alge927 Power and quotient rules with positive exponents
alge790 Evaluating expressions with exponents of zero
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
arith024 Ordering numbers with negative exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge961 Introduction to the product rule with negative exponents
alge028 Product rule with negative exponents
alge755 Quotient rule with negative exponents: Problem type 1

alge926 Quotient rule with negative exponents: Problem type 2
alge025 Power of a power rule with negative exponents
alge799 Power rules with negative exponents
alge928 Power and quotient rules with negative exponents: Problem type 1
alge929 Power and quotient rules with negative exponents: Problem type 2
alge757 Power, product, and quotient rules with negative exponents
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge932 Simplifying a sum or difference of multivariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge081 Multiplying conjugate binomials: Multivariate
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
alge973 Multiplying binomials with negative coefficients
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
alge605 Factoring a linear binomial
alge736 Introduction to the GCF of two monomials
alge930 Greatest common factor of three univariate monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
alge923 Factoring a univariate polynomial by grouping: Problem type 1
alge950 Factoring a univariate polynomial by grouping: Problem type 2
alge951 Factoring a multivariate polynomial by grouping: Problem type 1
alge952 Factoring a multivariate polynomial by grouping: Problem type 2
alge039 Factoring a quadratic with leading coefficient 1
alge942 Factoring a quadratic in two variables with leading coefficient 1
alge936 Factoring out a constant before factoring a quadratic
alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
alge978 Factoring a quadratic by the ac-method
alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
alge937 Factoring a quadratic with a negative leading coefficient
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
alge946 Factoring a perfect square trinomial in two variables
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge839 Factoring a difference of squares in two variables

alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
alge041 Factoring a product of a quadratic trinomial and a monomial
alge042 Factoring with repeated use of the difference of squares formula
alge044 Factoring a sum or difference of two cubes
pcalc577 Factoring out binomials from a polynomial: GCF factoring, advanced
pcalc578 Using substitution to factor polynomials
alge049 Restriction on a variable in a denominator: Linear
alge454 Simplifying a ratio of factored polynomials: Linear factors
alge455 Simplifying a ratio of factored polynomials: Factors with exponents
alge456 Simplifying a ratio of polynomials using GCF factoring
alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
alge710 Simplifying a ratio of polynomials: Problem type 1
alge682 Simplifying a ratio of polynomials: Problem type 2
alge459 Simplifying a ratio of polynomials: Problem type 3
alge034 Simplifying a ratio of multivariate polynomials
alge053 Multiplying rational expressions involving multivariate monomials
alge460 Multiplying rational expressions made up of linear expressions
alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
alge462 Multiplying rational expressions involving multivariate quadratics
alge054 Dividing rational expressions involving multivariate monomials
alge463 Dividing rational expressions involving linear expressions
alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
alge465 Dividing rational expressions involving multivariate quadratics
alge466 Multiplication and division of 3 rational expressions
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
alge428 Finding the LCD of rational expressions with linear denominators: Common factors
alge429 Finding the LCD of rational expressions with quadratic denominators
alge430 Writing equivalent rational expressions with monomial denominators
alge431 Writing equivalent rational expressions with polynomial denominators
alge304 Writing equivalent rational expressions involving opposite factors
alge432 Introduction to adding fractions with variables and common denominators
alge433 Adding rational expressions with common denominators and monomial numerators
alge056 Adding rational expressions with common denominators and binomial numerators
alge434 Adding rational expressions with common denominators and GCF factoring
alge435 Adding rational expressions with common denominators and quadratic factoring
alge436 Adding rational expressions with different denominators and a single occurrence of a variable
alge437 Adding rational expressions with denominators ax and bx : Basic
alge438 Adding rational expressions with denominators ax and bx : Advanced
alge439 Adding rational expressions with denominators axn and bxm
alge440 Adding rational expressions with multivariate monomial denominators: Basic
alge226 Adding rational expressions with multivariate monomial denominators: Advanced
alge441 Adding rational expressions with linear denominators without common factors: Basic
alge442 Adding rational expressions with linear denominators without common factors: Advanced
alge443 Adding rational expressions with linear denominators with common factors: Basic
alge444 Adding rational expressions with linear denominators with common factors: Advanced
alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
alge661 Adding rational expressions involving different quadratic denominators
alge446 Adding 3 rational expressions with different quadratic denominators
arith695 Complex fraction without variables: Problem type 1
arith696 Complex fraction without variables: Problem type 2
alge470 Complex fraction involving univariate monomials
alge058 Complex fraction involving multivariate monomials
alge471 Complex fraction: GCF factoring
alge472 Complex fraction: Quadratic factoring

alge473 Complex fraction made of sums involving rational expressions: Problem type 1
 alge474 Complex fraction made of sums involving rational expressions: Problem type 2
 alge475 Complex fraction made of sums involving rational expressions: Problem type 3
 alge476 Complex fraction made of sums involving rational expressions: Problem type 4
 alge477 Complex fraction made of sums involving rational expressions: Problem type 5
 alge478 Complex fraction made of sums involving rational expressions: Problem type 6
 alge479 Complex fraction made of sums involving rational expressions: Multivariate
 alge480 Complex fraction with negative exponents: Problem type 1
 alge481 Complex fraction with negative exponents: Problem type 2
 alge162 Complex fraction that contains a complex fraction
 alge413 Finding all square roots of a number
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith761 Square roots of integers raised to even exponents
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 alge603 Introduction to solving an absolute value equation
 alge537 Using absolute value to simplify square roots of perfect square monomials
 arith094 Cube root of an integer
 alge549 Finding nth roots of perfect nth powers with signs
 arith768 Finding the nth root of a perfect nth power fraction
 alge550 Finding the nth root of a perfect nth power monomial
 alge538 Using absolute value to simplify higher radical expressions
 alge812 Converting between radical form and exponent form
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge561 Rational exponents: Unit fraction exponents and bases involving signs
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge558 Rational exponents: Product rule
 alge559 Rational exponents: Quotient rule
 alge773 Rational exponents: Products and quotients with negative exponents
 alge562 Rational exponents: Power of a power rule
 alge249 Rational exponents: Powers of powers with negative exponents
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 alge520 Introduction to simplifying a radical expression with an odd exponent
 alge521 Simplifying a radical expression with an odd exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge551 Introduction to simplifying a higher radical expression
 alge552 Simplifying a higher radical expression: Univariate
 alge811 Simplifying a higher radical expression: Multivariate
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 alge533 Square root addition or subtraction with three terms
 alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
 alge532 Simplifying a sum or difference of radical expressions: Univariate
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 alge554 Simplifying a sum or difference of higher roots
 alge555 Simplifying a sum or difference of higher radical expressions
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith039 Square root multiplication: Advanced
 alge522 Introduction to simplifying a product of radical expressions: Univariate
 alge523 Simplifying a product of radical expressions: Univariate
 alge640 Simplifying a product of radical expressions: Multivariate
 alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
 alge556 Introduction to simplifying a product of higher roots
 alge557 Simplifying a product of higher radical expressions
 alge525 Introduction to simplifying a product involving square roots using the distributive property
 alge526 Simplifying a product involving square roots using the distributive property: Basic

alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge984 Classifying sums and products as rational or irrational
 arith766 Simplifying a quotient of square roots
 alge530 Simplifying a quotient involving a sum or difference with a square root
 alge527 Rationalizing a denominator: Quotient involving square roots
 alge528 Rationalizing a denominator: Square root of a fraction
 alge529 Rationalizing a denominator: Quotient involving a monomial
 alge534 Rationalizing a denominator using conjugates: Integer numerator
 alge535 Rationalizing a denominator using conjugates: Square root in numerator
 alge536 Rationalizing a denominator using conjugates: Variable in denominator
 alge564 Rationalizing a denominator: Quotient involving a higher radical
 alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
 alge563 Simplifying products or quotients of higher radicals with different indices: Univariate
 alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom802 Circumference and area of a circle
 geom477 Circumference and area of a circle: Exact answers in terms of pi
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem

Equations and Inequalities

alge836 Additive property of equality with signed fractions
 alge012 Multiplicative property of equality with signed fractions
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional

coefficients

alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators

alge742 Solving equations with zero, one, or infinitely many solutions

alge840 Solving a proportion of the form $(x+a)\div b = c\div d$

alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic

alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced

alge513 Solving for a variable in terms of other variables using multiplication or division: Basic

alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced

alge517 Solving for a variable in terms of other variables using addition or subtraction with division

alge518 Solving for a variable inside parentheses in terms of other variables

alge507 Solving for a variable in terms of other variables in a linear equation with fractions

alge016 Translating a sentence into a one-step equation

alge841 Translating a sentence into a multi-step equation

alge014 Solving a word problem with two unknowns using a linear equation

alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$

alge219 Solving a decimal word problem using a linear equation with the variable on both sides

alge704 Solving a fraction word problem using a linear equation with the variable on both sides

alge792 Solving a word problem with three unknowns using a linear equation

alge842 Solving a word problem involving consecutive integers

alge730 Writing a multi-step equation for a real-world situation

alge794 Solving a value mixture problem using a linear equation

alge823 Solving a one-step word problem using the formula $d = rt$

alge796 Solving a distance, rate, time problem using a linear equation

geom817 Finding a side length given the perimeter and side lengths with variables

geom143 Finding the perimeter or area of a rectangle given one of these values

geom838 Circumference ratios

geom530 Solving equations involving vertical angles

geom628 Finding angle measures of a triangle given angles with variables

stat803 Finding the value for a new score that will yield a given mean

arith852 Finding the multiplier to give a final amount after a percentage increase or decrease

arith847 Finding the sale price given the original price and percent discount

arith848 Finding the total cost including tax or markup

arith031 Finding the original price given the sale price and percent discount

arith854 Computing a percent mixture

alge795 Solving a percent mixture problem using a linear equation

arith232 Finding simple interest without a calculator

arith514 Converting a repeating decimal to a fraction

alge864 Solving an absolute value equation: Problem type 1

alge865 Solving an absolute value equation: Problem type 2

alge866 Solving an absolute value equation: Problem type 3

alge867 Solving an absolute value equation: Problem type 4

alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$

alge845 Translating a sentence into a one-step inequality

alge846 Translating a sentence into a multi-step inequality

alge748 Writing an inequality for a real-world situation

alge017 Graphing a linear inequality on the number line

alge822 Writing an inequality given a graph on the number line

alge186 Translating a sentence into a compound inequality

alge166 Graphing a compound inequality on the number line

alge847 Writing a compound inequality given a graph on the number line

set001 Set builder notation

set004 Set builder and interval notation

set002 Union and intersection of finite sets

set005 Union and intersection of intervals

alge844 Identifying solutions to a two-step linear inequality in one variable

alge852 Additive property of inequality with signed fractions

alge964 Multiplicative property of inequality with signed fractions

alge855 Solving a two-step linear inequality: Problem type 1

alge856 Solving a two-step linear inequality: Problem type 2

alge857 Solving a two-step linear inequality with a fractional coefficient

alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1

alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
alge860 Solving inequalities with no solution or all real numbers as solutions
alge746 Solving a compound linear inequality: Graph solution, basic
alge747 Solving a compound linear inequality: Interval notation
alge749 Solving a decimal word problem using a two-step linear inequality
alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
alge868 Solving an absolute value inequality: Problem type 1
alge943 Writing an absolute value inequality given a graph on the number line
alge869 Solving an absolute value inequality: Problem type 2
alge870 Solving an absolute value inequality: Problem type 3
alge871 Solving an absolute value inequality: Problem type 4
alge872 Solving an absolute value inequality: Problem type 5
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
geom133 Ratio of volumes
arith612 Word problem involving multiple rates
alge770 Solving a work problem using a rational equation
alge450 Solving a distance, rate, time problem using a rational equation
alge059 Ordering fractions with variables
alge778 Using i to rewrite square roots of negative numbers
alge779 Simplifying a product and quotient involving square roots of negative numbers
pcalc048 Adding or subtracting complex numbers
pcalc049 Multiplying complex numbers
pcalc050 Dividing complex numbers
pcalc053 Simplifying a power of i
alge681 Solving an equation written in factored form
alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge046 Roots of a product of polynomials
alge163 Writing a quadratic equation given the roots and the leading coefficient
alge703 Solving a word problem using a quadratic equation with rational roots
alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
alge962 Solving an equation of the form $x^2 = a$ using the square root property
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
alge094 Completing the square
alge780 Solving a quadratic equation by completing the square: Exact answers
alge095 Applying the quadratic formula: Exact answers
alge963 Applying the quadratic formula: Decimal answers
pcalc051 Solving a quadratic equation with complex roots
alge214 Discriminant of a quadratic equation
alge193 Discriminant of a quadratic equation with parameter
alge524 Solving a word problem using a quadratic equation with irrational roots
alge093 Solving an equation using the odd-root property: Problem type 1
alge228 Solving an equation using the odd-root property: Problem type 2
alge467 Restriction on a variable in a denominator: Quadratic

alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
 alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
 alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
 alge411 Solving a radical equation with a quadratic expression under the radical
 alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced
 alge410 Solving an equation with a root index greater than 2: Problem type 1
 alge417 Solving an equation with a root index greater than 2: Problem type 2
 alge416 Solving an equation with exponent $1/a$: Problem type 1
 alge418 Solving an equation with exponent $1/a$: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge782 Solving an equation that can be written in quadratic form: Problem type 2

Graphs and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane
 alge850 Table for a linear equation
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc678 Finding x - and y -intercepts of the graph of a nonlinear equation
 alge913 Graphing an absolute value equation of the form $y = A - |x - h|$
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 pcalc416 Determining if graphs have symmetry with respect to the x -axis, y -axis, or origin

pcalc679 Testing an equation for symmetry about the axes and origin
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y-intercept
alge196 Graphing a line through a given point with a given slope
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y-intercept
alge258 Writing an equation of a line given its slope and y-intercept
alge892 Writing an equation and graphing a line given its slope and y-intercept
alge314 Finding the slope, y-intercept, and equation for a linear function given a table of values
alge893 Writing an equation in slope-intercept form given the slope and a point
alge318 Finding the slope and a point on a line given its equation in point-slope form
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge313 Writing an equation in standard form given the slope and a point
alge070 Writing an equation of a line given the y-intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge322 Comparing linear functions to the parent function $y=x$
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
geom462 Identifying parallel and perpendicular lines from coordinates
geom322 Identifying coordinates that give right triangles
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge654 Graphing ordered pairs and writing an equation from a table of values in context
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge991 Solving a linear equation by graphing
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat069 Computing residuals
mstat070 Interpreting residual plots
mstat093 Classifying linear and nonlinear relationships from scatter plots
mstat071 Linear relationship and the correlation coefficient
mstat096 Identifying outliers and clustering in scatter plots
mstat095 Finding outliers in a data set
alge914 Identifying solutions to a system of linear equations
alge725 Graphically solving a system of linear equations
pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
alge317 Writing a system of linear equations given its graph
alge751 Solving a system of linear equations using substitution
alge915 Solving a system of linear equations using elimination with addition
alge076 Solving a system of linear equations using elimination with multiplication and addition

geom496 Identifying the center and radius to graph a circle given its equation in standard form
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 alge539 Table for a square root function
 alge546 Evaluating a cube root function
 pcalc682 Evaluating functions: Absolute value, rational, radical
 fun030 Evaluating a piecewise-defined function
 fun033 Variable expressions as inputs of functions: Problem type 1
 pcalc571 Variable expressions as inputs of functions: Problem type 2
 pcalc411 Variable expressions as inputs of functions: Problem type 3
 fun016 Domain and range from ordered pairs
 alge715 Domain of a rational function: Excluded values
 pcalc412 Domain of a rational function: Interval notation
 alge540 Domain of a square root function: Basic
 pcalc763 Domain of a square root function: Advanced
 alge547 Domains of higher root functions
 pcalc754 Finding the domain of a fractional function involving radicals
 pcalc924 Determining whether an equation defines a function: Basic
 pcalc757 Determining whether an equation defines a function: Advanced
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 pcalc471 Rewriting a multivariate function as a univariate function given a relationship between its variables
 pcalc753 Finding a difference quotient for a linear or quadratic function
 pcalc414 Finding a difference quotient for a rational function
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 pcalc439 Finding the absolute maximum and minimum of a function given the graph
 pcalc417 Finding values and intervals where the graph of a function is zero, positive, or negative
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge543 Graphing a square root function: Problem type 1
 alge544 Graphing a square root function: Problem type 2

alge545 Graphing a square root function: Problem type 3
alge548 Graphing a cube root function
pcalc443 Matching parent graphs with their equations
fun031 Graphing a piecewise-defined function: Problem type 1
pcalc444 Graphing a piecewise-defined function: Problem type 2
pcalc568 Graphing a piecewise-defined function: Problem type 3
pcalc114 Even and odd functions: Problem type 1
pcalc440 Even and odd functions: Problem type 2
pcalc768 Finding the average rate of change of a function
alge998 Finding the average rate of change of a function given its graph
pcalc442 Word problem involving average rate of change
pcalc441 Writing the equation of a secant line
pcalc467 Translating the graph of a parabola: One step
pcalc465 Translating the graph of a parabola: Two steps
alge723 How the leading coefficient affects the shape of a parabola
pcalc468 Translating the graph of an absolute value function: One step
alge899 Translating the graph of an absolute value function: Two steps
alge901 How the leading coefficient affects the graph of an absolute value function
alge185 Writing an equation for a function after a vertical translation
pcalc469 Translating the graph of a function: One step
pcalc770 Translating the graph of a function: Two steps
pcalc569 Transforming the graph of a function by reflecting over an axis
pcalc470 Transforming the graph of a function by shrinking or stretching
pcalc570 Transforming the graph of a function using more than one transformation
pcalc466 Transforming the graph of a quadratic, cubic, square root, or absolute value function
fun020 Writing an equation for a function after a vertical and horizontal translation
fun019 Sum, difference, and product of two functions
alge786 Quotient of two functions: Basic
pcalc413 Quotient of two functions: Advanced
pcalc756 Combining functions: Advanced
alge716 Introduction to the composition of two functions
fun022 Composition of two functions: Basic
pcalc484 Composition of a function with itself
pcalc776 Expressing a function as a composition of two functions
fun021 Composition of two functions: Domain and range
alge129 Composition of two functions: Advanced
pcalc483 Composition of two rational functions
pcalc485 Word problem involving composition of two functions
fun011 Horizontal line test
pcalc777 Determining whether two functions are inverses of each other
fun012 Inverse functions: Linear, discrete
pcalc573 Inverse functions: Quadratic, square root
pcalc572 Inverse functions: Cubic, cube root
alge130 Inverse functions: Rational
pcalc486 Graphing the inverse of a function given its graph
pcalc487 Finding, evaluating, and interpreting an inverse function for a given linear relationship

Polynomial and Rational Functions

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
alge569 Graphing a parabola of the form $y = x^2 + bx + c$
pcalc574 Graphing a parabola of the form $y = a(x-h)^2 + k$
pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
alge323 Finding the zeros of a quadratic function given its equation
pcalc714 Using a graphing calculator to find the zeros of a quadratic function
alge320 Writing a quadratic function given its zeros
alge277 Finding the x-intercept(s) and the vertex of a parabola
pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
alge319 Rewriting a quadratic function in standard form

pcalc550 Rewriting a quadratic function to find its vertex and sketch its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 pcalc551 Word problem involving optimizing area by using a quadratic function
 pcalc415 Domain and range from the graph of a quadratic function
 pcalc762 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 pcalc546 Identifying polynomial functions
 pcalc764 Finding zeros of a polynomial function written in factored form
 pcalc547 Finding zeros and their multiplicities given a polynomial function written in factored form
 pcalc766 Finding a polynomial of a given degree with given zeros: Real zeros
 pcalc765 Finding x- and y-intercepts given a polynomial function
 pcalc782 Determining the end behavior of the graph of a polynomial function
 pcalc548 Determining end behavior and intercepts to graph a polynomial function
 pcalc783 Matching graphs with polynomial functions
 pcalc738 Inferring properties of a polynomial function from its graph
 pcalc794 Using a graphing calculator to find local extrema of a polynomial function
 pcalc115 Using a graphing calculator to solve a word problem involving a local extremum of a polynomial function
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 pcalc117 Synthetic division
 pcalc786 Using the remainder theorem to evaluate a polynomial
 pcalc787 The Factor Theorem
 pcalc118 Remainder theorem: Advanced
 alge985 Closure properties of integers and polynomials
 pcalc741 Using a given zero to write a polynomial as a product of linear factors: Real zeros
 pcalc758 Finding all possible rational zeros using the rational zeros theorem: Problem type 1
 pcalc759 Finding all possible rational zeros using the rational zeros theorem: Problem type 2
 pcalc788 Descartes' Rule of Signs
 pcalc743 Using the rational zeros theorem to find all zeros of a polynomial: Rational zeros
 pcalc744 Using the rational zeros theorem to find all zeros of a polynomial: Irrational zeros
 pcalc795 Using a graphing calculator to find zeros of a polynomial function
 pcalc704 Using a graphing calculator to solve a word problem involving a polynomial of degree 3
 pcalc785 Multiplying expressions involving complex conjugates
 pcalc767 Finding a polynomial of a given degree with given zeros: Complex zeros
 pcalc742 Using a given zero to write a polynomial as a product of linear factors: Complex zeros
 pcalc745 Using the rational zeros theorem to find all zeros of a polynomial: Complex zeros
 pcalc703 Using the conjugate zeros theorem to find all zeros of a polynomial
 pcalc705 Linear factors theorem and conjugate zeros theorem
 pcalc552 Finding the intercepts, asymptotes, domain, and range from the graph of a rational function
 pcalc917 Finding the asymptotes of a rational function: Constant over linear
 pcalc918 Finding the asymptotes of a rational function: Linear over linear
 pcalc790 Finding horizontal and vertical asymptotes of a rational function: Quadratic numerator or denominator
 pcalc562 Finding the asymptotes of a rational function: Quadratic over linear
 alge515 Graphing a rational function: Constant over linear
 alge516 Graphing a rational function: Linear over linear
 pcalc553 Transforming the graph of a rational function
 pcalc109 Graphing a rational function: Quadratic over linear
 pcalc792 Graphing rational functions with holes
 pcalc791 Matching graphs with rational functions: Two vertical asymptotes
 pcalc557 Graphing a rational function with more than one vertical asymptote
 pcalc706 Writing the equation of a rational function given its graph
 pcalc556 Using a graphing calculator to solve a word problem involving a local extremum of a rational function
 alge784 Solving a quadratic inequality written in factored form

alge771 Solving a quadratic inequality
 pcalc558 Solving a polynomial inequality: Problem type 1
 pcalc560 Solving a polynomial inequality: Problem type 2
 pcalc561 Solving a polynomial inequality: Problem type 3
 pcalc559 Solving a polynomial inequality: Problem type 4
 alge783 Solving a rational inequality: Problem type 1
 pcalc677 Solving a rational inequality: Problem type 2
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation

Exponential and Logarithmic Functions

alge971 Table for an exponential function
 pcalc488 Graphing an exponential function: $f(x)=bx$
 pcalc489 Graphing an exponential function: $f(x) = a(b)^x$
 pcalc567 Graphing an exponential function: $f(x)=b-x$ or $f(x)=-bax$
 pcalc922 Translating the graph of an exponential function
 alge321 Finding domain and range from the graph of an exponential function
 pcalc797 The graph, domain, and range of an exponential function
 pcalc490 Transforming the graph of a natural exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^x-b + c$
 pcalc491 Using a calculator to evaluate exponential expressions
 alge830 Evaluating an exponential function that models a real-world situation
 pcalc555 Using a calculator to evaluate exponential expressions involving base e
 pcalc919 Evaluating an exponential function with base e that models a real-world situation
 arith853 Introduction to compound interest
 arith910 Calculating and comparing simple interest and compound interest
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 mstat103 Choosing an exponential model and using it to make a prediction
 alge993 Comparing linear, polynomial, and exponential functions
 pcalc492 Using a calculator to evaluate natural and common logarithmic expressions
 pcalc493 Converting between logarithmic and exponential equations
 pcalc494 Converting between natural logarithmic and exponential equations
 pcalc495 Evaluating logarithmic expressions
 alge233 Solving an equation of the form $\log_b a = c$
 pcalc923 Translating the graph of a logarithmic function
 alge788 Graphing a logarithmic function: Basic
 pcalc800 The graph, domain, and range of a logarithmic function
 pcalc801 Domain of a logarithmic function: Advanced
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc708 Basic properties of logarithms
 pcalc511 Using properties of logarithms to evaluate expressions
 pcalc779 Expanding a logarithmic expression: Problem type 1
 pcalc521 Expanding a logarithmic expression: Problem type 2
 pcalc522 Expanding a logarithmic expression: Problem type 3
 alge787 Writing an expression as a single logarithm

pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 pcalc513 Solving a multi-step equation involving a single logarithm: Problem type 1
 pcalc510 Solving a multi-step equation involving a single logarithm: Problem type 2
 pcalc804 Solving a multi-step equation involving natural logarithms
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge482 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic
 pcalc921 Solving an exponential equation by using natural logarithms: Decimal answers
 pcalc523 Solving an exponential equation by using logarithms: Decimal answers, advanced
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 pcalc802 Solving an exponential equation by using substitution and quadratic factoring
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc524 Finding the time in a word problem on compound interest
 pcalc508 Finding the time given an exponential function with base e that models a real-world situation
 pcalc525 Finding the final amount in a word problem on continuous compound interest
 pcalc527 Finding the initial amount in a word problem on continuous compound interest
 pcalc526 Finding the final amount in a word problem on continuous exponential growth or decay
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay
 pcalc528 Finding half-life or doubling time
 pcalc529 Writing and evaluating a function modeling continuous exponential growth or decay given doubling time or half-life
 pcalc530 Writing and evaluating a function modeling continuous exponential growth or decay given two outputs

Trigonometric Functions

pcalc001 Converting degrees-minutes-seconds to decimal degrees
 pcalc661 Converting a decimal degree to degrees-minutes-seconds
 pcalc002 Converting between degree and radian measure: Problem type 1
 pcalc621 Converting between degree and radian measure: Problem type 2
 pcalc006 Sketching an angle in standard position
 pcalc622 Coterminal angles
 pcalc005 Arc length and central angle measure
 pcalc623 Area of a sector of a circle
 pcalc624 Angular and linear speed
 pcalc627 Finding coordinates on the unit circle for special angles
 pcalc625 Finding a point on the unit circle given one coordinate
 pcalc629 Trigonometric functions and special angles: Problem type 1
 pcalc628 Finding trigonometric ratios from a point on the unit circle
 pcalc630 Trigonometric functions and special angles: Problem type 2
 pcalc631 Trigonometric functions and special angles: Problem type 3
 pcalc409 Evaluating expressions involving sine and cosine
 pcalc427 Even and odd properties of trigonometric functions
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc408 Using a calculator to approximate cosecant, secant, and cotangent values
 pcalc410 Evaluating a sinusoidal function that models a real-world situation
 geom506 Special right triangles: Exact answers
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem

pcalc642 Solving a right triangle
 pcalc473 Using trigonometry to find a length in a word problem with two right triangles
 pcalc626 Reference angles: Problem type 1
 pcalc632 Reference angles: Problem type 2
 pcalc671 Determining the location of a terminal point given the signs of trigonometric values
 pcalc011 Finding values of trigonometric functions given information about an angle: Problem type 1
 pcalc012 Finding values of trigonometric functions given information about an angle: Problem type 2
 pcalc013 Finding values of trigonometric functions given information about an angle: Problem type 3
 pcalc426 Finding values of trigonometric functions given information about an angle: Problem type 4
 pcalc445 Sketching the graph of $y = a \sin(x)$ or $y = a \cos(x)$
 pcalc446 Sketching the graph of $y = \sin(bx)$ or $y = \cos(bx)$
 pcalc447 Sketching the graph of $y = \sin(x) + d$ or $y = \cos(x) + d$
 pcalc448 Sketching the graph of $y = \sin(x+c)$ or $y = \cos(x+c)$
 pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
 pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
 pcalc014 Sketching the graph of $y = a \sin(bx+c)$ or $y = a \cos(bx+c)$
 pcalc438 Sketching the graph of $y = a \sin(bx) + d$ or $y = a \cos(bx) + d$
 pcalc633 Amplitude and period of sine and cosine functions
 pcalc634 Amplitude, period, and phase shift of sine and cosine functions
 pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1
 pcalc636 Writing the equation of a sine or cosine function given its graph: Problem type 2
 pcalc640 Word problem involving a sine or cosine function: Problem type 1
 pcalc641 Word problem involving a sine or cosine function: Problem type 2
 pcalc474 Sketching a graph of a damped sine or cosine function
 pcalc428 Domains and ranges of trigonometric functions
 pcalc637 Matching graphs and equations for secant, cosecant, tangent, and cotangent functions
 pcalc017 Sketching the graph of a secant or cosecant function: Problem type 1
 pcalc638 Sketching the graph of a secant or cosecant function: Problem type 2
 pcalc105 Sketching the graph of a tangent or cotangent function: Problem type 1
 pcalc015 Sketching the graph of a tangent or cotangent function: Problem type 2
 pcalc016 Values of inverse trigonometric functions
 pcalc018 Composition of a trigonometric function with its inverse trigonometric function: Problem type 1
 pcalc419 Composition of a trigonometric function with its inverse trigonometric function: Problem type 2
 pcalc420 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 1
 pcalc421 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 2
 pcalc036 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 3
 pcalc423 Composition of trigonometric functions with variable expressions as inputs: Problem type 1
 pcalc422 Composition of trigonometric functions with variable expressions as inputs: Problem type 2
 pcalc418 Using a calculator to approximate inverse trigonometric values

Trigonometric Identities and Equations

pcalc648 Simplifying trigonometric expressions
 pcalc666 Using cofunction identities
 pcalc110 Verifying a trigonometric identity
 pcalc034 Proving trigonometric identities: Problem type 1
 pcalc404 Proving trigonometric identities: Problem type 2
 pcalc405 Proving trigonometric identities: Problem type 3
 pcalc429 Proving trigonometric identities: Problem type 4
 pcalc406 Proving trigonometric identities using odd and even properties
 pcalc029 Sum and difference identities: Problem type 1
 pcalc663 Sum and difference identities: Problem type 2
 pcalc664 Sum and difference identities: Problem type 3
 pcalc430 Sum and difference identities: Problem type 4
 pcalc431 Proving trigonometric identities using sum and difference properties: Problem type 1
 pcalc432 Proving trigonometric identities using sum and difference properties: Problem type 2
 pcalc030 Double-angle identities: Problem type 1

pcalc667 Double-angle identities: Problem type 2
 pcalc434 Double-angle identities: Problem type 3
 pcalc437 Power-reducing identities
 pcalc662 Half-angle identities: Problem type 1
 pcalc665 Half-angle identities: Problem type 2
 pcalc124 Product-to-sum and sum-to-product identities: Problem type 1
 pcalc674 Product-to-sum and sum-to-product identities: Problem type 2
 pcalc402 Proving trigonometric identities using double-angle properties
 pcalc436 Proving trigonometric identities using sum-to-product formulas
 pcalc650 Finding solutions in an interval for a basic equation involving sine or cosine
 pcalc651 Finding solutions in an interval for a basic tangent, cotangent, secant, or cosecant equation
 pcalc660 Solving a basic trigonometric equation using a calculator
 pcalc020 Solving a basic trigonometric equation involving sine or cosine
 pcalc021 Solving a basic trigonometric equation involving tangent, cotangent, secant, or cosecant
 pcalc670 Finding solutions in an interval for a trigonometric equation in factored form
 pcalc652 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 1
 pcalc653 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 2
 pcalc654 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 1
 pcalc424 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 2
 pcalc657 Finding solutions in an interval for an equation with sine and cosine using double-angle identities
 pcalc668 Solving a trigonometric equation modeling a real-world situation
 pcalc811 Using a graphing calculator to solve a trigonometric equation
 pcalc127 Using a graphing calculator to solve a trigonometric inequality
 pcalc022 Solving a trigonometric equation involving a squared function: Problem type 1
 pcalc023 Solving a trigonometric equation involving a squared function: Problem type 2
 pcalc024 Solving a trigonometric equation involving more than one function
 pcalc025 Solving a trigonometric equation involving an angle multiplied by a constant
 pcalc655 Finding solutions in an interval for a trigonometric equation with an angle multiplied by a constant
 pcalc656 Finding solutions in an interval for an equation with sine and cosine using sum and difference identities
 pcalc026 Solving a trigonometric equation using sum and difference identities
 pcalc027 Solving a trigonometric equation using double-angle identities
 pcalc028 Solving a trigonometric equation using half-angle identities

Additional Topics in Trigonometry

pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 geom409 Proving the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom439 Using trigonometry to find the area of a right triangle
 pcalc646 Finding the area of a triangle using trigonometry
 geom319 Expressing the area of a triangle in terms of the sine of one of its angles
 pcalc647 Heron's formula
 vector028 Writing a position vector in $ai+bj$ form given its graph
 vector014 Writing a vector in $ai+bj$ form given its initial and terminal points
 vector013 Writing a vector in component form given its initial and terminal points
 vector015 Magnitude of a vector given in $ai+bj$ form
 pcalc060 Magnitude of a vector given in component form
 vector016 Vector addition and scalar multiplication: $ai+bj$ form
 vector017 Linear combination of vectors: $ai+bj$ form
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 pcalc729 Unit vectors
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 geom857 Vector addition: Geometric approach

vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph
 vector019 Finding the direction angle of a vector given in $ai+bj$ form
 vector018 Writing a vector given its magnitude and direction angle
 vector020 Writing a vector to represent a force pushing or pulling an object
 vector021 Finding the magnitude and direction angle of the resultant force of two vectors
 vector011 Finding magnitudes of forces related to a sum of three vectors
 vector012 Finding magnitudes of forces related to an object suspended by cables
 vector023 Dot product of vectors given in $ai+bj$ form
 vector009 Dot product of vectors given in component form
 pcalc730 Finding the angle between two vectors given in component form
 vector024 Classifying vector relationships by finding the angle between two vectors given in $ai + bj$ form
 vector010 Using the dot product to find perpendicular vectors
 vector006 Finding the component of a vector along another vector
 vector025 Decomposing a vector into two orthogonal vectors
 vector026 Finding the amount of work done given a force vector and a distance
 vector027 Finding magnitudes of forces related to an object on a ramp
 pcalc449 Plotting points in polar coordinates
 pcalc450 Multiple representations of polar coordinates
 pcalc056 Converting rectangular coordinates to polar coordinates: Special angles
 pcalc451 Converting rectangular coordinates to polar coordinates: Decimal answers
 pcalc057 Converting polar coordinates to rectangular coordinates
 pcalc058 Converting an equation written in rectangular form to one written in polar form
 pcalc452 Converting an equation written in polar form to one written in rectangular form: Problem type 1
 pcalc453 Converting an equation written in polar form to one written in rectangular form: Problem type 2
 pcalc454 Graphing a polar equation: Basic
 pcalc455 Graphing a polar equation: Circle
 pcalc456 Graphing a polar equation: Limacon
 pcalc457 Graphing a polar equation: Rose
 pcalc458 Graphing a polar equation: Lemniscate
 pcalc459 Matching polar equations with their graphs
 pcalc460 Identifying symmetries of graphs given their polar equations
 pcalc461 Plotting complex numbers
 pcalc462 Writing a complex number in standard form given its trigonometric form
 pcalc472 Writing a complex number in trigonometric form: Special angles
 pcalc052 Writing a complex number in trigonometric form: Decimal answers
 pcalc463 Multiplying and dividing complex numbers in trigonometric form
 pcalc464 De Moivre's Theorem: Answers in trigonometric form
 pcalc054 De Moivre's theorem: Answers in standard form
 pcalc807 Finding the n th roots of a number: Problem type 1
 pcalc808 Finding the n th roots of a number: Problem type 2

Systems of Equations and Matrices

alge075 Classifying systems of linear equations from graphs
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2×2 system of linear equations that is inconsistent or consistent dependent
 alge077 Creating an inconsistent system of linear equations
 alge988 Identifying the operations used to create equivalent systems of equations
 pcalc099 Consistency and independence of a system of linear equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations

pcalc496 Introduction to solving a 3x3 system of linear equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 pcalc497 Solving a 3x3 system of linear equations: Problem type 2
 pcalc498 Solving a 3x3 system of linear equations that is inconsistent or consistent dependent
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 pcalc549 Solving a word problem using a 3x3 system of linear equations: Problem type 2
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc507 Squaring and multiplying 2x2 matrices
 pcalc039 Multiplication of matrices: Basic
 pcalc710 Multiplication of matrices: Advanced
 pcalc503 Word problem involving multiplication of matrices
 pcalc504 Finding the inverse of a 2x2 matrix
 pcalc505 Finding the inverse of a 3x3 matrix
 pcalc042 Finding the determinant of a 2x2 matrix
 pcalc043 Finding the determinant of a 3x3 matrix
 pcalc564 Completing Gauss-Jordan elimination with a 2x2 matrix
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 pcalc500 Writing solutions to 3x3 systems of linear equations from augmented matrices
 pcalc499 Completing Gauss-Jordan elimination with a 3x3 matrix
 pcalc046 Solving a system of linear equations given its augmented matrix
 pcalc502 Finding the inverse of a matrix to solve a 2x2 system of linear equations
 pcalc711 Using the inverse of a matrix to solve a 3x3 system of linear equations
 pcalc045 Using Cramer's rule to solve a 2x2 system of linear equations
 pcalc047 Using Cramer's rule to solve a 3x3 system of linear equations
 pcalc531 Introduction to partial fraction decomposition with distinct linear factors
 pcalc812 Partial fraction decomposition with distinct linear factors
 pcalc813 Partial fraction decomposition with repeated linear factors
 pcalc814 Partial fraction decomposition with an irreducible quadratic factor
 pcalc533 Partial fraction decomposition with repeated, irreducible quadratic factors
 alge994 Graphically solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 pcalc796 Using a graphing calculator to solve a system of equations
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge995 Solving a system of linear and quadratic equations
 pcalc098 Solving a system of nonlinear equations: Problem type 1
 pcalc534 Solving a system of nonlinear equations: Problem type 2
 pcalc535 Solving a word problem involving geometry using a system of nonlinear equations
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
 alge316 Writing an inequality given its graph in the plane: Slanted boundary line
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 pcalc536 Graphing an inequality involving a circle
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc096 Graphing a system of nonlinear inequalities: Problem type 1
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc537 Solving a word problem using a system of linear inequalities: Problem type 2
 pcalc095 Linear programming
 pcalc094 Solving a word problem using linear programming

Conic Sections

pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$

pcalc575 Graphing a parabola of the form $x=a(y-k)^2+h$ or $y=a(x-h)^2+k$
 pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc068 Writing an equation of a parabola given the vertex and the focus
 pcalc475 Writing an equation of a parabola given the focus and the directrix
 geom494 Deriving the equation of a parabola given its focus and directrix
 pcalc476 Finding the vertex, focus, directrix, and axis of symmetry of a parabola
 pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc477 Writing an equation of a parabola given its graph
 pcalc478 Word problem involving a parabola
 pcalc734 Graphing an ellipse given its equation in standard form
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$
 pcalc071 Graphing an ellipse given its equation in general form
 pcalc479 Finding the center, vertices, and foci of an ellipse
 pcalc072 Finding the foci of an ellipse given its equation in general form
 pcalc074 Writing an equation of an ellipse given the center, an endpoint of an axis, and the length of the other axis
 pcalc073 Writing an equation of an ellipse given the foci and the major axis length
 pcalc097 Graphing a system of nonlinear inequalities: Problem type 2
 pcalc480 Word problem involving an ellipse
 pcalc735 Graphing a hyperbola given its equation in standard form
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 pcalc076 Graphing a hyperbola given its equation in general form
 pcalc481 Finding the center, vertices, foci, and asymptotes of a hyperbola
 pcalc077 Finding the foci of a hyperbola given its equation in general form
 pcalc078 Writing an equation of a hyperbola given the foci and the vertices
 pcalc482 Writing an equation of a hyperbola given the foci and the asymptotes: Basic
 pcalc079 Writing an equation of a hyperbola given the foci and the asymptotes: Advanced
 pcalc736 Classifying conics given their equations
 pcalc538 Completing a table and choosing a graph given a pair of parametric equations
 pcalc539 Writing the equation of a line and sketching its graph given its parametric equations
 pcalc540 Writing the equation of a parabola and sketching its graph given its parametric equations
 pcalc541 Writing the equation of a circle or ellipse and sketching its graph given its parametric equations
 pcalc542 Graphing a pair of parametric equations with a restricted domain: Line or parabola
 pcalc563 Graphing a pair of parametric equations with a restricted domain: Circle
 pcalc565 Graphing a pair of parametric equations with a restricted domain: Ellipse
 pcalc544 Completing pairs of parametric equations
 pcalc545 Word problem involving parametric equations for projectile motion: Problem type 1
 pcalc576 Word problem involving parametric equations for projectile motion: Problem type 2

Sequences, Series, and Probability

alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc715 Finding a specified term of an arithmetic sequence given two terms of the sequence
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence
 pcalc718 Sum of the first n terms of an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc717 Finding a specified term of a geometric sequence given two terms of the sequence
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule

alge911 Writing recursive rules for arithmetic and geometric sequences
 pcalc719 Sum of the first n terms of a geometric sequence
 pcalc720 Sum of an infinite geometric series
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 pcalc082 Factorial expressions
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat017 Computing permutations and combinations
 pcalc809 Introduction to permutations and combinations
 pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 pcalc090 Permutations and combinations: Problem type 3
 pcalc087 Binomial formula
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 mstat010 Probability of an event
 mstat046 Experimental and theoretical probability
 stat106 Outcomes and event probability
 mstat116 Probabilities of a permutation and a combination
 mstat011 Area as probability
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 stat119 Venn diagrams: Two events
 stat101 Venn diagrams: Word problems
 stat112 Probabilities involving two dice
 mstat115 Determining outcomes for compound events and complements of events
 mstat109 Using a Venn diagram to understand the addition rule for probability
 mstat108 Outcomes and event probability: Addition rule
 stat114 Probability of intersection or union: Word problems
 mstat104 Identifying independent events given values of probabilities
 stat115 Independent events: Basic
 stat120 Probability of union: Basic
 mstat110 Using a Venn diagram to understand the multiplication rule for probability
 mstat107 Outcomes and event probability: Conditional probability
 mstat105 Computing conditional probability using a two-way frequency table
 mstat106 Computing conditional probability to make an inference using a two-way frequency table
 stat116 Conditional probability: Basic
 stat109 Intersection and conditional probability
 stat174 Binomial problems: Basic
 stat155 Binomial problems: Advanced
 mstat114 Using a random number table to make a fair decision

Limits and Continuity

pcalc901 Estimating a limit numerically
 pcalc902 Finding limits from a graph
 pcalc905 Finding a limit by using the limit laws: Problem type 1
 pcalc904 Finding limits for a piecewise-defined function
 pcalc906 Finding a limit by using the limit laws: Problem type 2
 pcalc907 Finding a limit by using the limit laws: Problem type 3
 pcalc911 Squeeze Theorem
 pcalc903 Determining points of discontinuity from a graph
 pcalc914 Determining a parameter to make a function continuous
 pcalc915 Infinite limits and graphs
 pcalc910 Limits at infinity and graphs

pcalc908 Limits at infinity and rational functions
 pcalc909 Infinite limits and rational functions
 pcalc913 Finding a limit of a trigonometric function by using continuity
 pcalc912 Finding a limit by using special trigonometric limits

B.44 PreCalculus for College Readiness

Algebra and Geometry Review

arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith602 Estimating a square root
 arith712 Ordering real numbers
 alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith104 Operations with absolute value: Problem type 2
 alge694 Computing the distance between two integers on a number line
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 alge187 Properties of addition
 alge188 Properties of real numbers
 alge604 Distributive property: Integer coefficients
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero

arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 alge605 Factoring a linear binomial
 alge736 Introduction to the GCF of two monomials
 alge930 Greatest common factor of three univariate monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method

alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
alge937 Factoring a quadratic with a negative leading coefficient
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
alge946 Factoring a perfect square trinomial in two variables
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge839 Factoring a difference of squares in two variables
alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
alge041 Factoring a product of a quadratic trinomial and a monomial
alge042 Factoring with repeated use of the difference of squares formula
alge044 Factoring a sum or difference of two cubes
pcalc577 Factoring out binomials from a polynomial: GCF factoring, advanced
pcalc578 Using substitution to factor polynomials
alge049 Restriction on a variable in a denominator: Linear
alge454 Simplifying a ratio of factored polynomials: Linear factors
alge455 Simplifying a ratio of factored polynomials: Factors with exponents
alge456 Simplifying a ratio of polynomials using GCF factoring
alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
alge710 Simplifying a ratio of polynomials: Problem type 1
alge682 Simplifying a ratio of polynomials: Problem type 2
alge459 Simplifying a ratio of polynomials: Problem type 3
alge034 Simplifying a ratio of multivariate polynomials
alge053 Multiplying rational expressions involving multivariate monomials
alge460 Multiplying rational expressions made up of linear expressions
alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
alge462 Multiplying rational expressions involving multivariate quadratics
alge054 Dividing rational expressions involving multivariate monomials
alge463 Dividing rational expressions involving linear expressions
alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
alge465 Dividing rational expressions involving multivariate quadratics
alge466 Multiplication and division of 3 rational expressions
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
alge428 Finding the LCD of rational expressions with linear denominators: Common factors
alge429 Finding the LCD of rational expressions with quadratic denominators
alge430 Writing equivalent rational expressions with monomial denominators
alge431 Writing equivalent rational expressions with polynomial denominators
alge304 Writing equivalent rational expressions involving opposite factors
alge432 Introduction to adding fractions with variables and common denominators
alge433 Adding rational expressions with common denominators and monomial numerators
alge056 Adding rational expressions with common denominators and binomial numerators
alge434 Adding rational expressions with common denominators and GCF factoring
alge435 Adding rational expressions with common denominators and quadratic factoring
alge436 Adding rational expressions with different denominators and a single occurrence of a variable
alge437 Adding rational expressions with denominators ax and bx : Basic
alge438 Adding rational expressions with denominators ax and bx : Advanced
alge439 Adding rational expressions with denominators axn and bxm
alge440 Adding rational expressions with multivariate monomial denominators: Basic
alge226 Adding rational expressions with multivariate monomial denominators: Advanced
alge441 Adding rational expressions with linear denominators without common factors: Basic
alge442 Adding rational expressions with linear denominators without common factors: Advanced
alge443 Adding rational expressions with linear denominators with common factors: Basic
alge444 Adding rational expressions with linear denominators with common factors: Advanced
alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$

alge661 Adding rational expressions involving different quadratic denominators
alge446 Adding 3 rational expressions with different quadratic denominators
arith695 Complex fraction without variables: Problem type 1
arith696 Complex fraction without variables: Problem type 2
alge470 Complex fraction involving univariate monomials
alge058 Complex fraction involving multivariate monomials
alge471 Complex fraction: GCF factoring
alge472 Complex fraction: Quadratic factoring
alge473 Complex fraction made of sums involving rational expressions: Problem type 1
alge474 Complex fraction made of sums involving rational expressions: Problem type 2
alge475 Complex fraction made of sums involving rational expressions: Problem type 3
alge476 Complex fraction made of sums involving rational expressions: Problem type 4
alge477 Complex fraction made of sums involving rational expressions: Problem type 5
alge478 Complex fraction made of sums involving rational expressions: Problem type 6
alge479 Complex fraction made of sums involving rational expressions: Multivariate
alge480 Complex fraction with negative exponents: Problem type 1
alge481 Complex fraction with negative exponents: Problem type 2
alge162 Complex fraction that contains a complex fraction
alge413 Finding all square roots of a number
arith601 Square root of a rational perfect square
arith760 Square roots of perfect squares with signs
arith761 Square roots of integers raised to even exponents
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
alge603 Introduction to solving an absolute value equation
alge537 Using absolute value to simplify square roots of perfect square monomials
arith094 Cube root of an integer
alge549 Finding nth roots of perfect nth powers with signs
arith768 Finding the nth root of a perfect nth power fraction
alge550 Finding the nth root of a perfect nth power monomial
alge538 Using absolute value to simplify higher radical expressions
alge812 Converting between radical form and exponent form
alge560 Rational exponents: Unit fraction exponents and whole number bases
alge561 Rational exponents: Unit fraction exponents and bases involving signs
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge251 Rational exponents: Negative exponents and fractional bases
alge558 Rational exponents: Product rule
alge559 Rational exponents: Quotient rule
alge773 Rational exponents: Products and quotients with negative exponents
alge562 Rational exponents: Power of a power rule
alge249 Rational exponents: Powers of powers with negative exponents
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
alge275 Simplifying a radical expression with two variables
alge273 Simplifying a higher root of a whole number
alge551 Introduction to simplifying a higher radical expression
alge552 Simplifying a higher radical expression: Univariate
alge811 Simplifying a higher radical expression: Multivariate
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
alge533 Square root addition or subtraction with three terms
alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
alge532 Simplifying a sum or difference of radical expressions: Univariate
alge084 Simplifying a sum or difference of radical expressions: Multivariate
alge554 Simplifying a sum or difference of higher roots
alge555 Simplifying a sum or difference of higher radical expressions
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
arith039 Square root multiplication: Advanced

alge522 Introduction to simplifying a product of radical expressions: Univariate
 alge523 Simplifying a product of radical expressions: Univariate
 alge640 Simplifying a product of radical expressions: Multivariate
 alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
 alge556 Introduction to simplifying a product of higher roots
 alge557 Simplifying a product of higher radical expressions
 alge525 Introduction to simplifying a product involving square roots using the distributive property
 alge526 Simplifying a product involving square roots using the distributive property: Basic
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge984 Classifying sums and products as rational or irrational
 arith766 Simplifying a quotient of square roots
 alge530 Simplifying a quotient involving a sum or difference with a square root
 alge527 Rationalizing a denominator: Quotient involving square roots
 alge528 Rationalizing a denominator: Square root of a fraction
 alge529 Rationalizing a denominator: Quotient involving a monomial
 alge534 Rationalizing a denominator using conjugates: Integer numerator
 alge535 Rationalizing a denominator using conjugates: Square root in numerator
 alge536 Rationalizing a denominator using conjugates: Variable in denominator
 alge564 Rationalizing a denominator: Quotient involving a higher radical
 alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
 alge563 Simplifying products or quotients of higher radicals with different indices: Univariate
 alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom802 Circumference and area of a circle
 geom477 Circumference and area of a circle: Exact answers in terms of pi
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem

Equations and Inequalities

alge836 Additive property of equality with signed fractions
 alge012 Multiplicative property of equality with signed fractions
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution

alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge730 Writing a multi-step equation for a real-world situation
 alge794 Solving a value mixture problem using a linear equation
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom838 Circumference ratios
 geom530 Solving equations involving vertical angles
 geom628 Finding angle measures of a triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith031 Finding the original price given the sale price and percent discount
 arith854 Computing a percent mixture
 alge795 Solving a percent mixture problem using a linear equation
 arith232 Finding simple interest without a calculator
 arith514 Converting a repeating decimal to a fraction
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set004 Set builder and interval notation
 set002 Union and intersection of finite sets

set005 Union and intersection of intervals
alge844 Identifying solutions to a two-step linear inequality in one variable
alge852 Additive property of inequality with signed fractions
alge964 Multiplicative property of inequality with signed fractions
alge855 Solving a two-step linear inequality: Problem type 1
alge856 Solving a two-step linear inequality: Problem type 2
alge857 Solving a two-step linear inequality with a fractional coefficient
alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
alge860 Solving inequalities with no solution or all real numbers as solutions
alge746 Solving a compound linear inequality: Graph solution, basic
alge747 Solving a compound linear inequality: Interval notation
alge749 Solving a decimal word problem using a two-step linear inequality
alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
alge868 Solving an absolute value inequality: Problem type 1
alge943 Writing an absolute value inequality given a graph on the number line
alge869 Solving an absolute value inequality: Problem type 2
alge870 Solving an absolute value inequality: Problem type 3
alge871 Solving an absolute value inequality: Problem type 4
alge872 Solving an absolute value inequality: Problem type 5
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
geom133 Ratio of volumes
arith612 Word problem involving multiple rates
alge770 Solving a work problem using a rational equation
alge450 Solving a distance, rate, time problem using a rational equation
alge059 Ordering fractions with variables
alge778 Using i to rewrite square roots of negative numbers
alge779 Simplifying a product and quotient involving square roots of negative numbers
pcalc048 Adding or subtracting complex numbers
pcalc049 Multiplying complex numbers
pcalc050 Dividing complex numbers
pcalc053 Simplifying a power of i
alge681 Solving an equation written in factored form
alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge046 Roots of a product of polynomials
alge163 Writing a quadratic equation given the roots and the leading coefficient
alge703 Solving a word problem using a quadratic equation with rational roots
alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
alge962 Solving an equation of the form $x^2 = a$ using the square root property
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
alge094 Completing the square
alge780 Solving a quadratic equation by completing the square: Exact answers
alge095 Applying the quadratic formula: Exact answers

alge963 Applying the quadratic formula: Decimal answers
 pcalc051 Solving a quadratic equation with complex roots
 alge214 Discriminant of a quadratic equation
 alge193 Discriminant of a quadratic equation with parameter
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge228 Solving an equation using the odd-root property: Problem type 2
 alge467 Restriction on a variable in a denominator: Quadratic
 alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
 alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
 alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
 alge411 Solving a radical equation with a quadratic expression under the radical
 alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced
 alge410 Solving an equation with a root index greater than 2: Problem type 1
 alge417 Solving an equation with a root index greater than 2: Problem type 2
 alge416 Solving an equation with exponent $1/a$: Problem type 1
 alge418 Solving an equation with exponent $1/a$: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge782 Solving an equation that can be written in quadratic form: Problem type 2

Graphs and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane
 alge850 Table for a linear equation
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts

alge881 Graphing a line by first finding its x- and y-intercepts
pcalc750 Finding intercepts of a nonlinear function given its graph
pcalc678 Finding x- and y-intercepts of the graph of a nonlinear equation
alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
alge954 Graphing a parabola of the form $y = ax^2$
alge955 Graphing a parabola of the form $y = ax^2 + c$
alge262 Graphing a cubic function of the form $y = ax^3$
pcalc416 Determining if graphs have symmetry with respect to the x-axis, y-axis, or origin
pcalc679 Testing an equation for symmetry about the axes and origin
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y-intercept
alge196 Graphing a line through a given point with a given slope
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y-intercept
alge258 Writing an equation of a line given its slope and y-intercept
alge892 Writing an equation and graphing a line given its slope and y-intercept
alge314 Finding the slope, y-intercept, and equation for a linear function given a table of values
alge893 Writing an equation in slope-intercept form given the slope and a point
alge318 Finding the slope and a point on a line given its equation in point-slope form
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge313 Writing an equation in standard form given the slope and a point
alge070 Writing an equation of a line given the y-intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge322 Comparing linear functions to the parent function $y = x$
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
geom462 Identifying parallel and perpendicular lines from coordinates
geom322 Identifying coordinates that give right triangles
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge654 Graphing ordered pairs and writing an equation from a table of values in context
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge991 Solving a linear equation by graphing
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat069 Computing residuals
mstat070 Interpreting residual plots
mstat093 Classifying linear and nonlinear relationships from scatter plots
mstat071 Linear relationship and the correlation coefficient
mstat096 Identifying outliers and clustering in scatter plots
mstat095 Finding outliers in a data set

alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
 pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
 alge317 Writing a system of linear equations given its graph
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 alge539 Table for a square root function
 alge546 Evaluating a cube root function
 pcalc682 Evaluating functions: Absolute value, rational, radical
 fun030 Evaluating a piecewise-defined function
 fun033 Variable expressions as inputs of functions: Problem type 1
 pcalc571 Variable expressions as inputs of functions: Problem type 2
 pcalc411 Variable expressions as inputs of functions: Problem type 3
 fun016 Domain and range from ordered pairs
 alge715 Domain of a rational function: Excluded values
 pcalc412 Domain of a rational function: Interval notation
 alge540 Domain of a square root function: Basic
 pcalc763 Domain of a square root function: Advanced
 alge547 Domains of higher root functions
 pcalc754 Finding the domain of a fractional function involving radicals
 pcalc924 Determining whether an equation defines a function: Basic
 pcalc757 Determining whether an equation defines a function: Advanced
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 pcalc471 Rewriting a multivariate function as a univariate function given a relationship between its variables
 pcalc753 Finding a difference quotient for a linear or quadratic function
 pcalc414 Finding a difference quotient for a rational function
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 pcalc439 Finding the absolute maximum and minimum of a function given the graph
 pcalc417 Finding values and intervals where the graph of a function is zero, positive, or negative
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope

alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge543 Graphing a square root function: Problem type 1
 alge544 Graphing a square root function: Problem type 2
 alge545 Graphing a square root function: Problem type 3
 alge548 Graphing a cube root function
 pcalc443 Matching parent graphs with their equations
 fun031 Graphing a piecewise-defined function: Problem type 1
 pcalc444 Graphing a piecewise-defined function: Problem type 2
 pcalc568 Graphing a piecewise-defined function: Problem type 3
 pcalc114 Even and odd functions: Problem type 1
 pcalc440 Even and odd functions: Problem type 2
 pcalc768 Finding the average rate of change of a function
 alge998 Finding the average rate of change of a function given its graph
 pcalc442 Word problem involving average rate of change
 pcalc441 Writing the equation of a secant line
 pcalc467 Translating the graph of a parabola: One step
 pcalc465 Translating the graph of a parabola: Two steps
 alge723 How the leading coefficient affects the shape of a parabola
 pcalc468 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge185 Writing an equation for a function after a vertical translation
 pcalc469 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc569 Transforming the graph of a function by reflecting over an axis
 pcalc470 Transforming the graph of a function by shrinking or stretching
 pcalc570 Transforming the graph of a function using more than one transformation
 pcalc466 Transforming the graph of a quadratic, cubic, square root, or absolute value function
 fun020 Writing an equation for a function after a vertical and horizontal translation
 fun019 Sum, difference, and product of two functions
 alge786 Quotient of two functions: Basic
 pcalc413 Quotient of two functions: Advanced
 pcalc756 Combining functions: Advanced
 alge716 Introduction to the composition of two functions
 fun022 Composition of two functions: Basic
 pcalc484 Composition of a function with itself
 pcalc776 Expressing a function as a composition of two functions
 fun021 Composition of two functions: Domain and range
 alge129 Composition of two functions: Advanced
 pcalc483 Composition of two rational functions
 pcalc485 Word problem involving composition of two functions
 fun011 Horizontal line test
 pcalc777 Determining whether two functions are inverses of each other
 fun012 Inverse functions: Linear, discrete
 pcalc573 Inverse functions: Quadratic, square root
 pcalc572 Inverse functions: Cubic, cube root
 alge130 Inverse functions: Rational
 pcalc486 Graphing the inverse of a function given its graph
 pcalc487 Finding, evaluating, and interpreting an inverse function for a given linear relationship

Polynomial and Rational Functions

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc574 Graphing a parabola of the form $y = a(x-h)^2 + k$

pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge323 Finding the zeros of a quadratic function given its equation
 pcalc714 Using a graphing calculator to find the zeros of a quadratic function
 alge320 Writing a quadratic function given its zeros
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 alge319 Rewriting a quadratic function in standard form
 pcalc550 Rewriting a quadratic function to find its vertex and sketch its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 pcalc551 Word problem involving optimizing area by using a quadratic function
 pcalc415 Domain and range from the graph of a quadratic function
 pcalc762 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 pcalc546 Identifying polynomial functions
 pcalc764 Finding zeros of a polynomial function written in factored form
 pcalc547 Finding zeros and their multiplicities given a polynomial function written in factored form
 pcalc766 Finding a polynomial of a given degree with given zeros: Real zeros
 pcalc765 Finding x- and y-intercepts given a polynomial function
 pcalc782 Determining the end behavior of the graph of a polynomial function
 pcalc548 Determining end behavior and intercepts to graph a polynomial function
 pcalc783 Matching graphs with polynomial functions
 pcalc738 Inferring properties of a polynomial function from its graph
 pcalc794 Using a graphing calculator to find local extrema of a polynomial function
 pcalc115 Using a graphing calculator to solve a word problem involving a local extremum of a polynomial function
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 pcalc117 Synthetic division
 pcalc786 Using the remainder theorem to evaluate a polynomial
 pcalc787 The Factor Theorem
 pcalc118 Remainder theorem: Advanced
 alge985 Closure properties of integers and polynomials
 pcalc741 Using a given zero to write a polynomial as a product of linear factors: Real zeros
 pcalc758 Finding all possible rational zeros using the rational zeros theorem: Problem type 1
 pcalc759 Finding all possible rational zeros using the rational zeros theorem: Problem type 2
 pcalc788 Descartes' Rule of Signs
 pcalc743 Using the rational zeros theorem to find all zeros of a polynomial: Rational zeros
 pcalc744 Using the rational zeros theorem to find all zeros of a polynomial: Irrational zeros
 pcalc795 Using a graphing calculator to find zeros of a polynomial function
 pcalc704 Using a graphing calculator to solve a word problem involving a polynomial of degree 3
 pcalc785 Multiplying expressions involving complex conjugates
 pcalc767 Finding a polynomial of a given degree with given zeros: Complex zeros
 pcalc742 Using a given zero to write a polynomial as a product of linear factors: Complex zeros
 pcalc745 Using the rational zeros theorem to find all zeros of a polynomial: Complex zeros
 pcalc703 Using the conjugate zeros theorem to find all zeros of a polynomial
 pcalc705 Linear factors theorem and conjugate zeros theorem
 pcalc552 Finding the intercepts, asymptotes, domain, and range from the graph of a rational function
 pcalc917 Finding the asymptotes of a rational function: Constant over linear
 pcalc918 Finding the asymptotes of a rational function: Linear over linear
 pcalc790 Finding horizontal and vertical asymptotes of a rational function: Quadratic numerator or denominator
 pcalc562 Finding the asymptotes of a rational function: Quadratic over linear
 alge515 Graphing a rational function: Constant over linear
 alge516 Graphing a rational function: Linear over linear

pcalc553 Transforming the graph of a rational function
 pcalc109 Graphing a rational function: Quadratic over linear
 pcalc792 Graphing rational functions with holes
 pcalc791 Matching graphs with rational functions: Two vertical asymptotes
 pcalc557 Graphing a rational function with more than one vertical asymptote
 pcalc706 Writing the equation of a rational function given its graph
 pcalc556 Using a graphing calculator to solve a word problem involving a local extremum of a rational function
 alge784 Solving a quadratic inequality written in factored form
 alge771 Solving a quadratic inequality
 pcalc558 Solving a polynomial inequality: Problem type 1
 pcalc560 Solving a polynomial inequality: Problem type 2
 pcalc561 Solving a polynomial inequality: Problem type 3
 pcalc559 Solving a polynomial inequality: Problem type 4
 alge783 Solving a rational inequality: Problem type 1
 pcalc677 Solving a rational inequality: Problem type 2
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation

Exponential and Logarithmic Functions

alge971 Table for an exponential function
 pcalc488 Graphing an exponential function: $f(x)=bx$
 pcalc489 Graphing an exponential function: $f(x) = a(b)x$
 pcalc567 Graphing an exponential function: $f(x)=b-x$ or $f(x)=-bax$
 pcalc922 Translating the graph of an exponential function
 alge321 Finding domain and range from the graph of an exponential function
 pcalc797 The graph, domain, and range of an exponential function
 pcalc490 Transforming the graph of a natural exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)x-b + c$
 pcalc491 Using a calculator to evaluate exponential expressions
 alge830 Evaluating an exponential function that models a real-world situation
 pcalc555 Using a calculator to evaluate exponential expressions involving base e
 pcalc919 Evaluating an exponential function with base e that models a real-world situation
 arith853 Introduction to compound interest
 arith910 Calculating and comparing simple interest and compound interest
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 mstat103 Choosing an exponential model and using it to make a prediction
 alge993 Comparing linear, polynomial, and exponential functions
 pcalc492 Using a calculator to evaluate natural and common logarithmic expressions
 pcalc493 Converting between logarithmic and exponential equations
 pcalc494 Converting between natural logarithmic and exponential equations
 pcalc495 Evaluating logarithmic expressions
 alge233 Solving an equation of the form $\log_b a = c$
 pcalc923 Translating the graph of a logarithmic function
 alge788 Graphing a logarithmic function: Basic
 pcalc800 The graph, domain, and range of a logarithmic function

pcalc801 Domain of a logarithmic function: Advanced
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc708 Basic properties of logarithms
 pcalc511 Using properties of logarithms to evaluate expressions
 pcalc779 Expanding a logarithmic expression: Problem type 1
 pcalc521 Expanding a logarithmic expression: Problem type 2
 pcalc522 Expanding a logarithmic expression: Problem type 3
 alge787 Writing an expression as a single logarithm
 pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 pcalc513 Solving a multi-step equation involving a single logarithm: Problem type 1
 pcalc510 Solving a multi-step equation involving a single logarithm: Problem type 2
 pcalc804 Solving a multi-step equation involving natural logarithms
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge482 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic
 pcalc921 Solving an exponential equation by using natural logarithms: Decimal answers
 pcalc523 Solving an exponential equation by using logarithms: Decimal answers, advanced
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 pcalc802 Solving an exponential equation by using substitution and quadratic factoring
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc524 Finding the time in a word problem on compound interest
 pcalc508 Finding the time given an exponential function with base e that models a real-world situation
 pcalc525 Finding the final amount in a word problem on continuous compound interest
 pcalc527 Finding the initial amount in a word problem on continuous compound interest
 pcalc526 Finding the final amount in a word problem on continuous exponential growth or decay
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay
 pcalc528 Finding half-life or doubling time
 pcalc529 Writing and evaluating a function modeling continuous exponential growth or decay given doubling time or half-life
 pcalc530 Writing and evaluating a function modeling continuous exponential growth or decay given two outputs

Trigonometric Functions

pcalc001 Converting degrees-minutes-seconds to decimal degrees
 pcalc661 Converting a decimal degree to degrees-minutes-seconds
 pcalc002 Converting between degree and radian measure: Problem type 1
 pcalc621 Converting between degree and radian measure: Problem type 2
 pcalc006 Sketching an angle in standard position
 pcalc622 Coterminal angles
 pcalc005 Arc length and central angle measure
 pcalc623 Area of a sector of a circle
 pcalc624 Angular and linear speed
 pcalc627 Finding coordinates on the unit circle for special angles
 pcalc625 Finding a point on the unit circle given one coordinate
 pcalc629 Trigonometric functions and special angles: Problem type 1
 pcalc628 Finding trigonometric ratios from a point on the unit circle
 pcalc630 Trigonometric functions and special angles: Problem type 2
 pcalc631 Trigonometric functions and special angles: Problem type 3
 pcalc409 Evaluating expressions involving sine and cosine
 pcalc427 Even and odd properties of trigonometric functions
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc408 Using a calculator to approximate cosecant, secant, and cotangent values
 pcalc410 Evaluating a sinusoidal function that models a real-world situation
 geom506 Special right triangles: Exact answers
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio

pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle
 pcalc473 Using trigonometry to find a length in a word problem with two right triangles
 pcalc626 Reference angles: Problem type 1
 pcalc632 Reference angles: Problem type 2
 pcalc671 Determining the location of a terminal point given the signs of trigonometric values
 pcalc011 Finding values of trigonometric functions given information about an angle: Problem type 1
 pcalc012 Finding values of trigonometric functions given information about an angle: Problem type 2
 pcalc013 Finding values of trigonometric functions given information about an angle: Problem type 3
 pcalc426 Finding values of trigonometric functions given information about an angle: Problem type 4
 pcalc445 Sketching the graph of $y = a \sin(x)$ or $y = a \cos(x)$
 pcalc446 Sketching the graph of $y = \sin(bx)$ or $y = \cos(bx)$
 pcalc447 Sketching the graph of $y = \sin(x) + d$ or $y = \cos(x) + d$
 pcalc448 Sketching the graph of $y = \sin(x+c)$ or $y = \cos(x+c)$
 pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
 pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
 pcalc014 Sketching the graph of $y = a \sin(bx+c)$ or $y = a \cos(bx+c)$
 pcalc438 Sketching the graph of $y = a \sin(bx) + d$ or $y = a \cos(bx) + d$
 pcalc633 Amplitude and period of sine and cosine functions
 pcalc634 Amplitude, period, and phase shift of sine and cosine functions
 pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1
 pcalc636 Writing the equation of a sine or cosine function given its graph: Problem type 2
 pcalc640 Word problem involving a sine or cosine function: Problem type 1
 pcalc641 Word problem involving a sine or cosine function: Problem type 2
 pcalc474 Sketching a graph of a damped sine or cosine function
 pcalc428 Domains and ranges of trigonometric functions
 pcalc637 Matching graphs and equations for secant, cosecant, tangent, and cotangent functions
 pcalc017 Sketching the graph of a secant or cosecant function: Problem type 1
 pcalc638 Sketching the graph of a secant or cosecant function: Problem type 2
 pcalc105 Sketching the graph of a tangent or cotangent function: Problem type 1
 pcalc015 Sketching the graph of a tangent or cotangent function: Problem type 2
 pcalc016 Values of inverse trigonometric functions
 pcalc018 Composition of a trigonometric function with its inverse trigonometric function: Problem type 1
 pcalc419 Composition of a trigonometric function with its inverse trigonometric function: Problem type 2
 pcalc420 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 1
 pcalc421 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 2
 pcalc036 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 3
 pcalc423 Composition of trigonometric functions with variable expressions as inputs: Problem type 1
 pcalc422 Composition of trigonometric functions with variable expressions as inputs: Problem type 2
 pcalc418 Using a calculator to approximate inverse trigonometric values

Trigonometric Identities and Equations

pcalc648 Simplifying trigonometric expressions
 pcalc666 Using cofunction identities
 pcalc110 Verifying a trigonometric identity
 pcalc034 Proving trigonometric identities: Problem type 1
 pcalc404 Proving trigonometric identities: Problem type 2
 pcalc405 Proving trigonometric identities: Problem type 3
 pcalc429 Proving trigonometric identities: Problem type 4

pcalc406 Proving trigonometric identities using odd and even properties
 pcalc029 Sum and difference identities: Problem type 1
 pcalc663 Sum and difference identities: Problem type 2
 pcalc664 Sum and difference identities: Problem type 3
 pcalc430 Sum and difference identities: Problem type 4
 pcalc431 Proving trigonometric identities using sum and difference properties: Problem type 1
 pcalc432 Proving trigonometric identities using sum and difference properties: Problem type 2
 pcalc030 Double-angle identities: Problem type 1
 pcalc667 Double-angle identities: Problem type 2
 pcalc434 Double-angle identities: Problem type 3
 pcalc437 Power-reducing identities
 pcalc662 Half-angle identities: Problem type 1
 pcalc665 Half-angle identities: Problem type 2
 pcalc124 Product-to-sum and sum-to-product identities: Problem type 1
 pcalc674 Product-to-sum and sum-to-product identities: Problem type 2
 pcalc402 Proving trigonometric identities using double-angle properties
 pcalc436 Proving trigonometric identities using sum-to-product formulas
 pcalc650 Finding solutions in an interval for a basic equation involving sine or cosine
 pcalc651 Finding solutions in an interval for a basic tangent, cotangent, secant, or cosecant equation
 pcalc660 Solving a basic trigonometric equation using a calculator
 pcalc020 Solving a basic trigonometric equation involving sine or cosine
 pcalc021 Solving a basic trigonometric equation involving tangent, cotangent, secant, or cosecant
 pcalc670 Finding solutions in an interval for a trigonometric equation in factored form
 pcalc652 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 1
 pcalc653 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 2
 pcalc654 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 1
 pcalc424 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 2
 pcalc657 Finding solutions in an interval for an equation with sine and cosine using double-angle identities
 pcalc668 Solving a trigonometric equation modeling a real-world situation
 pcalc811 Using a graphing calculator to solve a trigonometric equation
 pcalc127 Using a graphing calculator to solve a trigonometric inequality
 pcalc022 Solving a trigonometric equation involving a squared function: Problem type 1
 pcalc023 Solving a trigonometric equation involving a squared function: Problem type 2
 pcalc024 Solving a trigonometric equation involving more than one function
 pcalc025 Solving a trigonometric equation involving an angle multiplied by a constant
 pcalc655 Finding solutions in an interval for a trigonometric equation with an angle multiplied by a constant
 pcalc656 Finding solutions in an interval for an equation with sine and cosine using sum and difference identities
 pcalc026 Solving a trigonometric equation using sum and difference identities
 pcalc027 Solving a trigonometric equation using double-angle identities
 pcalc028 Solving a trigonometric equation using half-angle identities

Additional Topics in Trigonometry

pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 geom409 Proving the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom439 Using trigonometry to find the area of a right triangle
 pcalc646 Finding the area of a triangle using trigonometry
 geom319 Expressing the area of a triangle in terms of the sine of one of its angles
 pcalc647 Heron's formula
 vector028 Writing a position vector in $a\mathbf{i}+b\mathbf{j}$ form given its graph
 vector014 Writing a vector in $a\mathbf{i}+b\mathbf{j}$ form given its initial and terminal points
 vector013 Writing a vector in component form given its initial and terminal points
 vector015 Magnitude of a vector given in $a\mathbf{i}+b\mathbf{j}$ form

pcalc060 Magnitude of a vector given in component form
 vector016 Vector addition and scalar multiplication: $a_i + b_j$ form
 vector017 Linear combination of vectors: $a_i + b_j$ form
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 pcalc729 Unit vectors
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph
 vector019 Finding the direction angle of a vector given in $a_i + b_j$ form
 vector018 Writing a vector given its magnitude and direction angle
 vector020 Writing a vector to represent a force pushing or pulling an object
 vector021 Finding the magnitude and direction angle of the resultant force of two vectors
 vector011 Finding magnitudes of forces related to a sum of three vectors
 vector012 Finding magnitudes of forces related to an object suspended by cables
 vector023 Dot product of vectors given in $a_i + b_j$ form
 vector009 Dot product of vectors given in component form
 pcalc730 Finding the angle between two vectors given in component form
 vector024 Classifying vector relationships by finding the angle between two vectors given in $a_i + b_j$ form
 vector010 Using the dot product to find perpendicular vectors
 vector006 Finding the component of a vector along another vector
 vector025 Decomposing a vector into two orthogonal vectors
 vector026 Finding the amount of work done given a force vector and a distance
 vector027 Finding magnitudes of forces related to an object on a ramp
 pcalc449 Plotting points in polar coordinates
 pcalc450 Multiple representations of polar coordinates
 pcalc056 Converting rectangular coordinates to polar coordinates: Special angles
 pcalc451 Converting rectangular coordinates to polar coordinates: Decimal answers
 pcalc057 Converting polar coordinates to rectangular coordinates
 pcalc058 Converting an equation written in rectangular form to one written in polar form
 pcalc452 Converting an equation written in polar form to one written in rectangular form: Problem type 1
 pcalc453 Converting an equation written in polar form to one written in rectangular form: Problem type 2
 pcalc454 Graphing a polar equation: Basic
 pcalc455 Graphing a polar equation: Circle
 pcalc456 Graphing a polar equation: Limacon
 pcalc457 Graphing a polar equation: Rose
 pcalc458 Graphing a polar equation: Lemniscate
 pcalc459 Matching polar equations with their graphs
 pcalc460 Identifying symmetries of graphs given their polar equations
 pcalc461 Plotting complex numbers
 pcalc462 Writing a complex number in standard form given its trigonometric form
 pcalc472 Writing a complex number in trigonometric form: Special angles
 pcalc052 Writing a complex number in trigonometric form: Decimal answers
 pcalc463 Multiplying and dividing complex numbers in trigonometric form
 pcalc464 De Moivre's Theorem: Answers in trigonometric form
 pcalc054 De Moivre's theorem: Answers in standard form
 pcalc807 Finding the n th roots of a number: Problem type 1
 pcalc808 Finding the n th roots of a number: Problem type 2

Systems of Equations and Matrices

alge075 Classifying systems of linear equations from graphs
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2×2 system of linear equations that is inconsistent or consistent dependent
 alge077 Creating an inconsistent system of linear equations
 alge988 Identifying the operations used to create equivalent systems of equations
 pcalc099 Consistency and independence of a system of linear equations

alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 pcalc496 Introduction to solving a 3x3 system of linear equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 pcalc497 Solving a 3x3 system of linear equations: Problem type 2
 pcalc498 Solving a 3x3 system of linear equations that is inconsistent or consistent dependent
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 pcalc549 Solving a word problem using a 3x3 system of linear equations: Problem type 2
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc507 Squaring and multiplying 2x2 matrices
 pcalc039 Multiplication of matrices: Basic
 pcalc710 Multiplication of matrices: Advanced
 pcalc503 Word problem involving multiplication of matrices
 pcalc504 Finding the inverse of a 2x2 matrix
 pcalc505 Finding the inverse of a 3x3 matrix
 pcalc042 Finding the determinant of a 2x2 matrix
 pcalc043 Finding the determinant of a 3x3 matrix
 pcalc564 Completing Gauss-Jordan elimination with a 2x2 matrix
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 pcalc500 Writing solutions to 3x3 systems of linear equations from augmented matrices
 pcalc499 Completing Gauss-Jordan elimination with a 3x3 matrix
 pcalc046 Solving a system of linear equations given its augmented matrix
 pcalc502 Finding the inverse of a matrix to solve a 2x2 system of linear equations
 pcalc711 Using the inverse of a matrix to solve a 3x3 system of linear equations
 pcalc045 Using Cramer's rule to solve a 2x2 system of linear equations
 pcalc047 Using Cramer's rule to solve a 3x3 system of linear equations
 pcalc531 Introduction to partial fraction decomposition with distinct linear factors
 pcalc812 Partial fraction decomposition with distinct linear factors
 pcalc813 Partial fraction decomposition with repeated linear factors
 pcalc814 Partial fraction decomposition with an irreducible quadratic factor
 pcalc533 Partial fraction decomposition with repeated, irreducible quadratic factors
 alge994 Graphically solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 pcalc796 Using a graphing calculator to solve a system of equations
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge995 Solving a system of linear and quadratic equations
 pcalc098 Solving a system of nonlinear equations: Problem type 1
 pcalc534 Solving a system of nonlinear equations: Problem type 2
 pcalc535 Solving a word problem involving geometry using a system of nonlinear equations
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
 alge316 Writing an inequality given its graph in the plane: Slanted boundary line
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 pcalc536 Graphing an inequality involving a circle
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc096 Graphing a system of nonlinear inequalities: Problem type 1
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1

pcalc537 Solving a word problem using a system of linear inequalities: Problem type 2
 pcalc095 Linear programming
 pcalc094 Solving a word problem using linear programming

Conic Sections

pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 pcalc575 Graphing a parabola of the form $x=a(y-k)^2+h$ or $y=a(x-h)^2+k$
 pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc068 Writing an equation of a parabola given the vertex and the focus
 pcalc475 Writing an equation of a parabola given the focus and the directrix
 geom494 Deriving the equation of a parabola given its focus and directrix
 pcalc476 Finding the vertex, focus, directrix, and axis of symmetry of a parabola
 pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc477 Writing an equation of a parabola given its graph
 pcalc478 Word problem involving a parabola
 pcalc734 Graphing an ellipse given its equation in standard form
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$
 pcalc071 Graphing an ellipse given its equation in general form
 pcalc479 Finding the center, vertices, and foci of an ellipse
 pcalc072 Finding the foci of an ellipse given its equation in general form
 pcalc074 Writing an equation of an ellipse given the center, an endpoint of an axis, and the length of the other axis
 pcalc073 Writing an equation of an ellipse given the foci and the major axis length
 pcalc097 Graphing a system of nonlinear inequalities: Problem type 2
 pcalc480 Word problem involving an ellipse
 pcalc735 Graphing a hyperbola given its equation in standard form
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 pcalc076 Graphing a hyperbola given its equation in general form
 pcalc481 Finding the center, vertices, foci, and asymptotes of a hyperbola
 pcalc077 Finding the foci of a hyperbola given its equation in general form
 pcalc078 Writing an equation of a hyperbola given the foci and the vertices
 pcalc482 Writing an equation of a hyperbola given the foci and the asymptotes: Basic
 pcalc079 Writing an equation of a hyperbola given the foci and the asymptotes: Advanced
 pcalc736 Classifying conics given their equations
 pcalc538 Completing a table and choosing a graph given a pair of parametric equations
 pcalc539 Writing the equation of a line and sketching its graph given its parametric equations
 pcalc540 Writing the equation of a parabola and sketching its graph given its parametric equations
 pcalc541 Writing the equation of a circle or ellipse and sketching its graph given its parametric equations
 pcalc542 Graphing a pair of parametric equations with a restricted domain: Line or parabola
 pcalc563 Graphing a pair of parametric equations with a restricted domain: Circle
 pcalc565 Graphing a pair of parametric equations with a restricted domain: Ellipse
 pcalc544 Completing pairs of parametric equations
 pcalc545 Word problem involving parametric equations for projectile motion: Problem type 1
 pcalc576 Word problem involving parametric equations for projectile motion: Problem type 2

Sequences, Series, and Probability

alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc715 Finding a specified term of an arithmetic sequence given two terms of the sequence
 alge909 Writing an explicit rule for an arithmetic sequence

alge910 Writing a recursive rule for an arithmetic sequence
 pcalc718 Sum of the first n terms of an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc717 Finding a specified term of a geometric sequence given two terms of the sequence
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 pcalc719 Sum of the first n terms of a geometric sequence
 pcalc720 Sum of an infinite geometric series
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 pcalc082 Factorial expressions
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat017 Computing permutations and combinations
 pcalc809 Introduction to permutations and combinations
 pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 pcalc090 Permutations and combinations: Problem type 3
 pcalc087 Binomial formula
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 mstat010 Probability of an event
 mstat046 Experimental and theoretical probability
 stat106 Outcomes and event probability
 mstat116 Probabilities of a permutation and a combination
 mstat011 Area as probability
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 stat119 Venn diagrams: Two events
 stat101 Venn diagrams: Word problems
 stat112 Probabilities involving two dice
 mstat115 Determining outcomes for compound events and complements of events
 mstat109 Using a Venn diagram to understand the addition rule for probability
 mstat108 Outcomes and event probability: Addition rule
 stat114 Probability of intersection or union: Word problems
 mstat104 Identifying independent events given values of probabilities
 stat115 Independent events: Basic
 stat120 Probability of union: Basic
 mstat110 Using a Venn diagram to understand the multiplication rule for probability
 mstat107 Outcomes and event probability: Conditional probability
 mstat105 Computing conditional probability using a two-way frequency table
 mstat106 Computing conditional probability to make an inference using a two-way frequency table
 stat116 Conditional probability: Basic
 stat109 Intersection and conditional probability
 stat174 Binomial problems: Basic
 stat155 Binomial problems: Advanced
 mstat114 Using a random number table to make a fair decision

Limits and Continuity

pcalc901 Estimating a limit numerically
 pcalc902 Finding limits from a graph

pcalc905 Finding a limit by using the limit laws: Problem type 1
 pcalc904 Finding limits for a piecewise-defined function
 pcalc906 Finding a limit by using the limit laws: Problem type 2
 pcalc907 Finding a limit by using the limit laws: Problem type 3
 pcalc911 Squeeze Theorem
 pcalc903 Determining points of discontinuity from a graph
 pcalc914 Determining a parameter to make a function continuous
 pcalc915 Infinite limits and graphs
 pcalc910 Limits at infinity and graphs
 pcalc908 Limits at infinity and rational functions
 pcalc909 Infinite limits and rational functions
 pcalc913 Finding a limit of a trigonometric function by using continuity
 pcalc912 Finding a limit by using special trigonometric limits

B.45 Trigonometry

Algebra and Geometry Review

arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith602 Estimating a square root
 arith712 Ordering real numbers
 alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith104 Operations with absolute value: Problem type 2
 alge694 Computing the distance between two integers on a number line
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 alge187 Properties of addition
 alge188 Properties of real numbers
 alge604 Distributive property: Integer coefficients
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients

alge756 Power and product rules with positive exponents
alge451 Simplifying a ratio of multivariate monomials: Basic
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
alge453 Simplifying a ratio of multivariate monomials: Advanced
alge927 Power and quotient rules with positive exponents
alge790 Evaluating expressions with exponents of zero
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
alge791 Rewriting an algebraic expression without a negative exponent
alge961 Introduction to the product rule with negative exponents
alge028 Product rule with negative exponents
alge755 Quotient rule with negative exponents: Problem type 1
alge926 Quotient rule with negative exponents: Problem type 2
alge025 Power of a power rule with negative exponents
alge799 Power rules with negative exponents
alge928 Power and quotient rules with negative exponents: Problem type 1
alge929 Power and quotient rules with negative exponents: Problem type 2
alge757 Power, product, and quotient rules with negative exponents
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge932 Simplifying a sum or difference of multivariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge081 Multiplying conjugate binomials: Multivariate
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
alge973 Multiplying binomials with negative coefficients
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
alge605 Factoring a linear binomial
alge736 Introduction to the GCF of two monomials
alge930 Greatest common factor of three univariate monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
alge923 Factoring a univariate polynomial by grouping: Problem type 1
alge950 Factoring a univariate polynomial by grouping: Problem type 2
alge951 Factoring a multivariate polynomial by grouping: Problem type 1
alge952 Factoring a multivariate polynomial by grouping: Problem type 2

alge039 Factoring a quadratic with leading coefficient 1
alge942 Factoring a quadratic in two variables with leading coefficient 1
alge936 Factoring out a constant before factoring a quadratic
alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
alge978 Factoring a quadratic by the ac-method
alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
alge937 Factoring a quadratic with a negative leading coefficient
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
alge946 Factoring a perfect square trinomial in two variables
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge839 Factoring a difference of squares in two variables
alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
alge041 Factoring a product of a quadratic trinomial and a monomial
alge042 Factoring with repeated use of the difference of squares formula
alge044 Factoring a sum or difference of two cubes
pcalc577 Factoring out binomials from a polynomial: GCF factoring, advanced
pcalc578 Using substitution to factor polynomials
alge049 Restriction on a variable in a denominator: Linear
alge454 Simplifying a ratio of factored polynomials: Linear factors
alge455 Simplifying a ratio of factored polynomials: Factors with exponents
alge456 Simplifying a ratio of polynomials using GCF factoring
alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
alge710 Simplifying a ratio of polynomials: Problem type 1
alge682 Simplifying a ratio of polynomials: Problem type 2
alge459 Simplifying a ratio of polynomials: Problem type 3
alge034 Simplifying a ratio of multivariate polynomials
alge053 Multiplying rational expressions involving multivariate monomials
alge460 Multiplying rational expressions made up of linear expressions
alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
alge462 Multiplying rational expressions involving multivariate quadratics
alge054 Dividing rational expressions involving multivariate monomials
alge463 Dividing rational expressions involving linear expressions
alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
alge465 Dividing rational expressions involving multivariate quadratics
alge466 Multiplication and division of 3 rational expressions
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
alge428 Finding the LCD of rational expressions with linear denominators: Common factors
alge429 Finding the LCD of rational expressions with quadratic denominators
alge430 Writing equivalent rational expressions with monomial denominators
alge431 Writing equivalent rational expressions with polynomial denominators
alge304 Writing equivalent rational expressions involving opposite factors
alge432 Introduction to adding fractions with variables and common denominators
alge433 Adding rational expressions with common denominators and monomial numerators
alge056 Adding rational expressions with common denominators and binomial numerators
alge434 Adding rational expressions with common denominators and GCF factoring
alge435 Adding rational expressions with common denominators and quadratic factoring
alge436 Adding rational expressions with different denominators and a single occurrence of a variable
alge437 Adding rational expressions with denominators ax and bx : Basic
alge438 Adding rational expressions with denominators ax and bx : Advanced
alge439 Adding rational expressions with denominators axn and bxm

alge440 Adding rational expressions with multivariate monomial denominators: Basic
alge226 Adding rational expressions with multivariate monomial denominators: Advanced
alge441 Adding rational expressions with linear denominators without common factors: Basic
alge442 Adding rational expressions with linear denominators without common factors: Advanced
alge443 Adding rational expressions with linear denominators with common factors: Basic
alge444 Adding rational expressions with linear denominators with common factors: Advanced
alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
alge661 Adding rational expressions involving different quadratic denominators
alge446 Adding 3 rational expressions with different quadratic denominators
arith695 Complex fraction without variables: Problem type 1
arith696 Complex fraction without variables: Problem type 2
alge470 Complex fraction involving univariate monomials
alge058 Complex fraction involving multivariate monomials
alge471 Complex fraction: GCF factoring
alge472 Complex fraction: Quadratic factoring
alge473 Complex fraction made of sums involving rational expressions: Problem type 1
alge474 Complex fraction made of sums involving rational expressions: Problem type 2
alge475 Complex fraction made of sums involving rational expressions: Problem type 3
alge476 Complex fraction made of sums involving rational expressions: Problem type 4
alge477 Complex fraction made of sums involving rational expressions: Problem type 5
alge478 Complex fraction made of sums involving rational expressions: Problem type 6
alge413 Finding all square roots of a number
arith601 Square root of a rational perfect square
arith760 Square roots of perfect squares with signs
arith761 Square roots of integers raised to even exponents
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
alge603 Introduction to solving an absolute value equation
alge537 Using absolute value to simplify square roots of perfect square monomials
arith094 Cube root of an integer
alge549 Finding n th roots of perfect n th powers with signs
arith768 Finding the n th root of a perfect n th power fraction
alge550 Finding the n th root of a perfect n th power monomial
alge538 Using absolute value to simplify higher radical expressions
alge812 Converting between radical form and exponent form
alge560 Rational exponents: Unit fraction exponents and whole number bases
alge561 Rational exponents: Unit fraction exponents and bases involving signs
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge251 Rational exponents: Negative exponents and fractional bases
alge558 Rational exponents: Product rule
alge559 Rational exponents: Quotient rule
alge773 Rational exponents: Products and quotients with negative exponents
alge562 Rational exponents: Power of a power rule
alge249 Rational exponents: Powers of powers with negative exponents
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
alge275 Simplifying a radical expression with two variables
alge273 Simplifying a higher root of a whole number
alge551 Introduction to simplifying a higher radical expression
alge552 Simplifying a higher radical expression: Univariate
alge811 Simplifying a higher radical expression: Multivariate
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
alge533 Square root addition or subtraction with three terms
alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
alge532 Simplifying a sum or difference of radical expressions: Univariate
alge084 Simplifying a sum or difference of radical expressions: Multivariate
alge554 Simplifying a sum or difference of higher roots
alge555 Simplifying a sum or difference of higher radical expressions

arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith039 Square root multiplication: Advanced
 alge522 Introduction to simplifying a product of radical expressions: Univariate
 alge523 Simplifying a product of radical expressions: Univariate
 alge640 Simplifying a product of radical expressions: Multivariate
 alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
 alge556 Introduction to simplifying a product of higher roots
 alge557 Simplifying a product of higher radical expressions
 alge525 Introduction to simplifying a product involving square roots using the distributive property
 alge526 Simplifying a product involving square roots using the distributive property: Basic
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge984 Classifying sums and products as rational or irrational
 arith766 Simplifying a quotient of square roots
 alge530 Simplifying a quotient involving a sum or difference with a square root
 alge527 Rationalizing a denominator: Quotient involving square roots
 alge528 Rationalizing a denominator: Square root of a fraction
 alge529 Rationalizing a denominator: Quotient involving a monomial
 alge534 Rationalizing a denominator using conjugates: Integer numerator
 alge535 Rationalizing a denominator using conjugates: Square root in numerator
 alge536 Rationalizing a denominator using conjugates: Variable in denominator
 alge564 Rationalizing a denominator: Quotient involving a higher radical
 alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
 alge563 Simplifying products or quotients of higher radicals with different indices: Univariate
 alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom802 Circumference and area of a circle
 geom477 Circumference and area of a circle: Exact answers in terms of pi
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem

Equations and Inequalities

alge836 Additive property of equality with signed fractions
 alge012 Multiplicative property of equality with signed fractions
 alge837 Solving a multi-step equation given in fractional form

alge986 Identifying properties used to solve a linear equation
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge730 Writing a multi-step equation for a real-world situation
 alge794 Solving a value mixture problem using a linear equation
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge796 Solving a distance, rate, time problem using a linear equation
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom838 Circumference ratios
 geom628 Finding angle measures of a triangle given angles with variables
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith031 Finding the original price given the sale price and percent discount
 arith854 Computing a percent mixture
 alge795 Solving a percent mixture problem using a linear equation
 arith232 Finding simple interest without a calculator
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set004 Set builder and interval notation
 set002 Union and intersection of finite sets
 set005 Union and intersection of intervals

alge844 Identifying solutions to a two-step linear inequality in one variable
alge852 Additive property of inequality with signed fractions
alge964 Multiplicative property of inequality with signed fractions
alge855 Solving a two-step linear inequality: Problem type 1
alge856 Solving a two-step linear inequality: Problem type 2
alge857 Solving a two-step linear inequality with a fractional coefficient
alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
alge860 Solving inequalities with no solution or all real numbers as solutions
alge746 Solving a compound linear inequality: Graph solution, basic
alge747 Solving a compound linear inequality: Interval notation
alge749 Solving a decimal word problem using a two-step linear inequality
alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
alge868 Solving an absolute value inequality: Problem type 1
alge943 Writing an absolute value inequality given a graph on the number line
alge869 Solving an absolute value inequality: Problem type 2
alge870 Solving an absolute value inequality: Problem type 3
alge871 Solving an absolute value inequality: Problem type 4
alge872 Solving an absolute value inequality: Problem type 5
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
arith612 Word problem involving multiple rates
alge770 Solving a work problem using a rational equation
alge450 Solving a distance, rate, time problem using a rational equation
alge778 Using i to rewrite square roots of negative numbers
alge779 Simplifying a product and quotient involving square roots of negative numbers
pcalc048 Adding or subtracting complex numbers
pcalc049 Multiplying complex numbers
pcalc050 Dividing complex numbers
pcalc053 Simplifying a power of i
alge681 Solving an equation written in factored form
alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge046 Roots of a product of polynomials
alge163 Writing a quadratic equation given the roots and the leading coefficient
alge703 Solving a word problem using a quadratic equation with rational roots
alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
alge962 Solving an equation of the form $x^2 = a$ using the square root property
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
alge094 Completing the square
alge780 Solving a quadratic equation by completing the square: Exact answers
alge095 Applying the quadratic formula: Exact answers
alge963 Applying the quadratic formula: Decimal answers
pcalc051 Solving a quadratic equation with complex roots
alge214 Discriminant of a quadratic equation

alge193 Discriminant of a quadratic equation with parameter
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge228 Solving an equation using the odd-root property: Problem type 2
 alge784 Solving a quadratic inequality written in factored form
 alge771 Solving a quadratic inequality
 alge467 Restriction on a variable in a denominator: Quadratic
 alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
 alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
 alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
 alge411 Solving a radical equation with a quadratic expression under the radical
 alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced
 alge410 Solving an equation with a root index greater than 2: Problem type 1
 alge417 Solving an equation with a root index greater than 2: Problem type 2
 alge416 Solving an equation with exponent $1/a$: Problem type 1
 alge418 Solving an equation with exponent $1/a$: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge782 Solving an equation that can be written in quadratic form: Problem type 2

Graphs and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane
 alge850 Table for a linear equation
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts

pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc678 Finding x- and y-intercepts of the graph of a nonlinear equation
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 pcalc416 Determining if graphs have symmetry with respect to the x-axis, y-axis, or origin
 pcalc679 Testing an equation for symmetry about the axes and origin
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge314 Finding the slope, y-intercept, and equation for a linear function given a table of values
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge318 Finding the slope and a point on a line given its equation in point-slope form
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge313 Writing an equation in standard form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge322 Comparing linear functions to the parent function $y = x$
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 geom462 Identifying parallel and perpendicular lines from coordinates
 geom322 Identifying coordinates that give right triangles
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
 pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
 alge317 Writing a system of linear equations given its graph
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle

geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 alge539 Table for a square root function
 alge546 Evaluating a cube root function
 pcalc682 Evaluating functions: Absolute value, rational, radical
 alge971 Table for an exponential function
 fun030 Evaluating a piecewise-defined function
 fun033 Variable expressions as inputs of functions: Problem type 1
 pcalc571 Variable expressions as inputs of functions: Problem type 2
 pcalc411 Variable expressions as inputs of functions: Problem type 3
 fun016 Domain and range from ordered pairs
 alge715 Domain of a rational function: Excluded values
 pcalc412 Domain of a rational function: Interval notation
 alge540 Domain of a square root function: Basic
 pcalc763 Domain of a square root function: Advanced
 alge547 Domains of higher root functions
 pcalc754 Finding the domain of a fractional function involving radicals
 pcalc924 Determining whether an equation defines a function: Basic
 pcalc757 Determining whether an equation defines a function: Advanced
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 pcalc471 Rewriting a multivariate function as a univariate function given a relationship between its variables
 pcalc753 Finding a difference quotient for a linear or quadratic function
 pcalc414 Finding a difference quotient for a rational function
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 pcalc439 Finding the absolute maximum and minimum of a function given the graph
 pcalc417 Finding values and intervals where the graph of a function is zero, positive, or negative
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge543 Graphing a square root function: Problem type 1
 alge544 Graphing a square root function: Problem type 2
 alge545 Graphing a square root function: Problem type 3
 alge548 Graphing a cube root function
 pcalc488 Graphing an exponential function: $f(x)=bx$

pcalc443 Matching parent graphs with their equations
fun031 Graphing a piecewise-defined function: Problem type 1
pcalc444 Graphing a piecewise-defined function: Problem type 2
pcalc568 Graphing a piecewise-defined function: Problem type 3
pcalc114 Even and odd functions: Problem type 1
pcalc440 Even and odd functions: Problem type 2
pcalc768 Finding the average rate of change of a function
alge998 Finding the average rate of change of a function given its graph
pcalc442 Word problem involving average rate of change
pcalc441 Writing the equation of a secant line
pcalc467 Translating the graph of a parabola: One step
pcalc465 Translating the graph of a parabola: Two steps
alge723 How the leading coefficient affects the shape of a parabola
pcalc468 Translating the graph of an absolute value function: One step
alge899 Translating the graph of an absolute value function: Two steps
alge901 How the leading coefficient affects the graph of an absolute value function
alge185 Writing an equation for a function after a vertical translation
pcalc469 Translating the graph of a function: One step
pcalc770 Translating the graph of a function: Two steps
pcalc569 Transforming the graph of a function by reflecting over an axis
pcalc470 Transforming the graph of a function by shrinking or stretching
pcalc570 Transforming the graph of a function using more than one transformation
pcalc466 Transforming the graph of a quadratic, cubic, square root, or absolute value function
fun020 Writing an equation for a function after a vertical and horizontal translation
fun019 Sum, difference, and product of two functions
alge786 Quotient of two functions: Basic
pcalc413 Quotient of two functions: Advanced
pcalc756 Combining functions: Advanced
alge716 Introduction to the composition of two functions
fun022 Composition of two functions: Basic
pcalc484 Composition of a function with itself
pcalc776 Expressing a function as a composition of two functions
fun021 Composition of two functions: Domain and range
alge129 Composition of two functions: Advanced
pcalc483 Composition of two rational functions
pcalc485 Word problem involving composition of two functions
fun011 Horizontal line test
pcalc777 Determining whether two functions are inverses of each other
fun012 Inverse functions: Linear, discrete
pcalc573 Inverse functions: Quadratic, square root
pcalc572 Inverse functions: Cubic, cube root
alge130 Inverse functions: Rational
pcalc486 Graphing the inverse of a function given its graph
pcalc487 Finding, evaluating, and interpreting an inverse function for a given linear relationship
alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
alge569 Graphing a parabola of the form $y = x^2 + bx + c$
pcalc574 Graphing a parabola of the form $y = a(x-h)^2 + k$
pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
alge323 Finding the zeros of a quadratic function given its equation
pcalc714 Using a graphing calculator to find the zeros of a quadratic function
alge320 Writing a quadratic function given its zeros
alge277 Finding the x-intercept(s) and the vertex of a parabola
pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
alge319 Rewriting a quadratic function in standard form
pcalc550 Rewriting a quadratic function to find its vertex and sketch its graph
pcalc775 Finding the maximum or minimum of a quadratic function
alge785 Word problem involving the maximum or minimum of a quadratic function
pcalc551 Word problem involving optimizing area by using a quadratic function
pcalc415 Domain and range from the graph of a quadratic function
pcalc762 Range of a quadratic function
pcalc680 Writing the equation of a quadratic function given its graph

pcalc764 Finding zeros of a polynomial function written in factored form
 pcalc765 Finding x- and y-intercepts given a polynomial function
 pcalc794 Using a graphing calculator to find local extrema of a polynomial function
 pcalc795 Using a graphing calculator to find zeros of a polynomial function

Trigonometric Functions

pcalc001 Converting degrees-minutes-seconds to decimal degrees
 pcalc661 Converting a decimal degree to degrees-minutes-seconds
 pcalc002 Converting between degree and radian measure: Problem type 1
 pcalc621 Converting between degree and radian measure: Problem type 2
 pcalc006 Sketching an angle in standard position
 pcalc622 Coterminal angles
 pcalc005 Arc length and central angle measure
 pcalc623 Area of a sector of a circle
 pcalc624 Angular and linear speed
 pcalc627 Finding coordinates on the unit circle for special angles
 pcalc625 Finding a point on the unit circle given one coordinate
 pcalc629 Trigonometric functions and special angles: Problem type 1
 pcalc628 Finding trigonometric ratios from a point on the unit circle
 pcalc630 Trigonometric functions and special angles: Problem type 2
 pcalc631 Trigonometric functions and special angles: Problem type 3
 pcalc409 Evaluating expressions involving sine and cosine
 pcalc427 Even and odd properties of trigonometric functions
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc408 Using a calculator to approximate cosecant, secant, and cotangent values
 pcalc410 Evaluating a sinusoidal function that models a real-world situation
 geom506 Special right triangles: Exact answers
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle
 pcalc473 Using trigonometry to find a length in a word problem with two right triangles
 pcalc626 Reference angles: Problem type 1
 pcalc632 Reference angles: Problem type 2
 pcalc671 Determining the location of a terminal point given the signs of trigonometric values
 pcalc011 Finding values of trigonometric functions given information about an angle: Problem type 1
 pcalc012 Finding values of trigonometric functions given information about an angle: Problem type 2
 pcalc013 Finding values of trigonometric functions given information about an angle: Problem type 3
 pcalc426 Finding values of trigonometric functions given information about an angle: Problem type 4

Trigonometric Graphs

pcalc445 Sketching the graph of $y = a \sin(x)$ or $y = a \cos(x)$
 pcalc446 Sketching the graph of $y = \sin(bx)$ or $y = \cos(bx)$
 pcalc447 Sketching the graph of $y = \sin(x) + d$ or $y = \cos(x) + d$
 pcalc448 Sketching the graph of $y = \sin(x+c)$ or $y = \cos(x+c)$
 pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
 pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
 pcalc014 Sketching the graph of $y = a \sin(bx+c)$ or $y = a \cos(bx+c)$

pcalc438 Sketching the graph of $y = a \sin(bx) + d$ or $y = a \cos(bx) + d$
 pcalc633 Amplitude and period of sine and cosine functions
 pcalc634 Amplitude, period, and phase shift of sine and cosine functions
 pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1
 pcalc636 Writing the equation of a sine or cosine function given its graph: Problem type 2
 pcalc640 Word problem involving a sine or cosine function: Problem type 1
 pcalc641 Word problem involving a sine or cosine function: Problem type 2
 pcalc474 Sketching a graph of a damped sine or cosine function
 pcalc428 Domains and ranges of trigonometric functions
 pcalc637 Matching graphs and equations for secant, cosecant, tangent, and cotangent functions
 pcalc017 Sketching the graph of a secant or cosecant function: Problem type 1
 pcalc638 Sketching the graph of a secant or cosecant function: Problem type 2
 pcalc105 Sketching the graph of a tangent or cotangent function: Problem type 1
 pcalc015 Sketching the graph of a tangent or cotangent function: Problem type 2

Trigonometric Identities and Equations

pcalc016 Values of inverse trigonometric functions
 pcalc018 Composition of a trigonometric function with its inverse trigonometric function: Problem type 1
 pcalc419 Composition of a trigonometric function with its inverse trigonometric function: Problem type 2
 pcalc420 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 1
 pcalc421 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 2
 pcalc036 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 3
 pcalc423 Composition of trigonometric functions with variable expressions as inputs: Problem type 1
 pcalc422 Composition of trigonometric functions with variable expressions as inputs: Problem type 2
 pcalc418 Using a calculator to approximate inverse trigonometric values
 pcalc648 Simplifying trigonometric expressions
 pcalc666 Using cofunction identities
 pcalc110 Verifying a trigonometric identity
 pcalc034 Proving trigonometric identities: Problem type 1
 pcalc404 Proving trigonometric identities: Problem type 2
 pcalc405 Proving trigonometric identities: Problem type 3
 pcalc429 Proving trigonometric identities: Problem type 4
 pcalc406 Proving trigonometric identities using odd and even properties
 pcalc029 Sum and difference identities: Problem type 1
 pcalc663 Sum and difference identities: Problem type 2
 pcalc664 Sum and difference identities: Problem type 3
 pcalc430 Sum and difference identities: Problem type 4
 pcalc431 Proving trigonometric identities using sum and difference properties: Problem type 1
 pcalc432 Proving trigonometric identities using sum and difference properties: Problem type 2
 pcalc030 Double-angle identities: Problem type 1
 pcalc667 Double-angle identities: Problem type 2
 pcalc434 Double-angle identities: Problem type 3
 pcalc437 Power-reducing identities
 pcalc662 Half-angle identities: Problem type 1
 pcalc665 Half-angle identities: Problem type 2
 pcalc124 Product-to-sum and sum-to-product identities: Problem type 1
 pcalc674 Product-to-sum and sum-to-product identities: Problem type 2
 pcalc402 Proving trigonometric identities using double-angle properties
 pcalc436 Proving trigonometric identities using sum-to-product formulas
 pcalc650 Finding solutions in an interval for a basic equation involving sine or cosine
 pcalc651 Finding solutions in an interval for a basic tangent, cotangent, secant, or cosecant equation
 pcalc660 Solving a basic trigonometric equation using a calculator
 pcalc020 Solving a basic trigonometric equation involving sine or cosine
 pcalc021 Solving a basic trigonometric equation involving tangent, cotangent, secant, or cosecant
 pcalc670 Finding solutions in an interval for a trigonometric equation in factored form
 pcalc652 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 1

pcalc653 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 2
 pcalc654 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 1
 pcalc424 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 2
 pcalc657 Finding solutions in an interval for an equation with sine and cosine using double-angle identities
 pcalc668 Solving a trigonometric equation modeling a real-world situation
 pcalc811 Using a graphing calculator to solve a trigonometric equation
 pcalc127 Using a graphing calculator to solve a trigonometric inequality
 pcalc022 Solving a trigonometric equation involving a squared function: Problem type 1
 pcalc023 Solving a trigonometric equation involving a squared function: Problem type 2
 pcalc024 Solving a trigonometric equation involving more than one function
 pcalc025 Solving a trigonometric equation involving an angle multiplied by a constant
 pcalc655 Finding solutions in an interval for a trigonometric equation with an angle multiplied by a constant
 pcalc656 Finding solutions in an interval for an equation with sine and cosine using sum and difference identities
 pcalc026 Solving a trigonometric equation using sum and difference identities
 pcalc027 Solving a trigonometric equation using double-angle identities
 pcalc028 Solving a trigonometric equation using half-angle identities

Triangles and Vectors

pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 geom409 Proving the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom439 Using trigonometry to find the area of a right triangle
 pcalc646 Finding the area of a triangle using trigonometry
 geom319 Expressing the area of a triangle in terms of the sine of one of its angles
 pcalc647 Heron's formula
 vector028 Writing a position vector in $ai+bj$ form given its graph
 vector014 Writing a vector in $ai+bj$ form given its initial and terminal points
 vector013 Writing a vector in component form given its initial and terminal points
 vector015 Magnitude of a vector given in $ai+bj$ form
 pcalc060 Magnitude of a vector given in component form
 vector016 Vector addition and scalar multiplication: $ai+bj$ form
 vector017 Linear combination of vectors: $ai+bj$ form
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 pcalc729 Unit vectors
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph
 vector019 Finding the direction angle of a vector given in $ai+bj$ form
 vector018 Writing a vector given its magnitude and direction angle
 vector020 Writing a vector to represent a force pushing or pulling an object
 vector021 Finding the magnitude and direction angle of the resultant force of two vectors
 vector011 Finding magnitudes of forces related to a sum of three vectors
 vector012 Finding magnitudes of forces related to an object suspended by cables
 vector023 Dot product of vectors given in $ai+bj$ form
 vector009 Dot product of vectors given in component form
 pcalc730 Finding the angle between two vectors given in component form
 vector024 Classifying vector relationships by finding the angle between two vectors given in $ai + bj$ form
 vector010 Using the dot product to find perpendicular vectors
 vector006 Finding the component of a vector along another vector
 vector025 Decomposing a vector into two orthogonal vectors

vector026 Finding the amount of work done given a force vector and a distance

vector027 Finding magnitudes of forces related to an object on a ramp

Polar Coordinates and Complex Numbers

pcalc449 Plotting points in polar coordinates

pcalc450 Multiple representations of polar coordinates

pcalc056 Converting rectangular coordinates to polar coordinates: Special angles

pcalc451 Converting rectangular coordinates to polar coordinates: Decimal answers

pcalc057 Converting polar coordinates to rectangular coordinates

pcalc058 Converting an equation written in rectangular form to one written in polar form

pcalc452 Converting an equation written in polar form to one written in rectangular form: Problem type 1

pcalc453 Converting an equation written in polar form to one written in rectangular form: Problem type 2

pcalc454 Graphing a polar equation: Basic

pcalc455 Graphing a polar equation: Circle

pcalc456 Graphing a polar equation: Limacon

pcalc457 Graphing a polar equation: Rose

pcalc458 Graphing a polar equation: Lemniscate

pcalc459 Matching polar equations with their graphs

pcalc460 Identifying symmetries of graphs given their polar equations

pcalc461 Plotting complex numbers

pcalc462 Writing a complex number in standard form given its trigonometric form

pcalc472 Writing a complex number in trigonometric form: Special angles

pcalc052 Writing a complex number in trigonometric form: Decimal answers

pcalc463 Multiplying and dividing complex numbers in trigonometric form

pcalc464 De Moivre's Theorem: Answers in trigonometric form

pcalc054 De Moivre's theorem: Answers in standard form

pcalc807 Finding the n th roots of a number: Problem type 1

pcalc808 Finding the n th roots of a number: Problem type 2

Conic Sections

pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$

pcalc575 Graphing a parabola of the form $x = a(y - k)^2 + h$ or $y = a(x - h)^2 + k$

pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$

pcalc068 Writing an equation of a parabola given the vertex and the focus

pcalc475 Writing an equation of a parabola given the focus and the directrix

geom494 Deriving the equation of a parabola given its focus and directrix

pcalc476 Finding the vertex, focus, directrix, and axis of symmetry of a parabola

pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$

pcalc477 Writing an equation of a parabola given its graph

pcalc478 Word problem involving a parabola

pcalc734 Graphing an ellipse given its equation in standard form

pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$

pcalc071 Graphing an ellipse given its equation in general form

pcalc479 Finding the center, vertices, and foci of an ellipse

pcalc072 Finding the foci of an ellipse given its equation in general form

pcalc074 Writing an equation of an ellipse given the center, an endpoint of an axis, and the length of the other axis

pcalc073 Writing an equation of an ellipse given the foci and the major axis length

pcalc480 Word problem involving an ellipse

pcalc735 Graphing a hyperbola given its equation in standard form

pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$

pcalc076 Graphing a hyperbola given its equation in general form

pcalc481 Finding the center, vertices, foci, and asymptotes of a hyperbola

pcalc077 Finding the foci of a hyperbola given its equation in general form

pcalc078 Writing an equation of a hyperbola given the foci and the vertices

pcalc482 Writing an equation of a hyperbola given the foci and the asymptotes: Basic

pcalc079 Writing an equation of a hyperbola given the foci and the asymptotes: Advanced
 pcalc736 Classifying conics given their equations
 pcalc538 Completing a table and choosing a graph given a pair of parametric equations
 pcalc539 Writing the equation of a line and sketching its graph given its parametric equations
 pcalc540 Writing the equation of a parabola and sketching its graph given its parametric equations
 pcalc541 Writing the equation of a circle or ellipse and sketching its graph given its parametric equations
 pcalc542 Graphing a pair of parametric equations with a restricted domain: Line or parabola
 pcalc563 Graphing a pair of parametric equations with a restricted domain: Circle
 pcalc565 Graphing a pair of parametric equations with a restricted domain: Ellipse
 pcalc544 Completing pairs of parametric equations
 pcalc545 Word problem involving parametric equations for projectile motion: Problem type 1
 pcalc576 Word problem involving parametric equations for projectile motion: Problem type 2

Exponential and Logarithmic Functions

pcalc489 Graphing an exponential function: $f(x) = a(b)^x$
 pcalc567 Graphing an exponential function: $f(x)=b \cdot x$ or $f(x)=-bax$
 pcalc922 Translating the graph of an exponential function
 alge321 Finding domain and range from the graph of an exponential function
 pcalc797 The graph, domain, and range of an exponential function
 pcalc490 Transforming the graph of a natural exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^x - b + c$
 pcalc491 Using a calculator to evaluate exponential expressions
 alge830 Evaluating an exponential function that models a real-world situation
 pcalc555 Using a calculator to evaluate exponential expressions involving base e
 pcalc919 Evaluating an exponential function with base e that models a real-world situation
 arith853 Introduction to compound interest
 arith910 Calculating and comparing simple interest and compound interest
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge993 Comparing linear, polynomial, and exponential functions
 pcalc492 Using a calculator to evaluate natural and common logarithmic expressions
 pcalc493 Converting between logarithmic and exponential equations
 pcalc494 Converting between natural logarithmic and exponential equations
 pcalc495 Evaluating logarithmic expressions
 alge233 Solving an equation of the form $\log_b a = c$
 pcalc923 Translating the graph of a logarithmic function
 alge788 Graphing a logarithmic function: Basic
 pcalc800 The graph, domain, and range of a logarithmic function
 pcalc801 Domain of a logarithmic function: Advanced
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc708 Basic properties of logarithms
 pcalc511 Using properties of logarithms to evaluate expressions
 pcalc779 Expanding a logarithmic expression: Problem type 1
 pcalc521 Expanding a logarithmic expression: Problem type 2
 pcalc522 Expanding a logarithmic expression: Problem type 3
 alge787 Writing an expression as a single logarithm
 pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 pcalc513 Solving a multi-step equation involving a single logarithm: Problem type 1
 pcalc510 Solving a multi-step equation involving a single logarithm: Problem type 2
 pcalc804 Solving a multi-step equation involving natural logarithms
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge482 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic

pcalc921 Solving an exponential equation by using natural logarithms: Decimal answers
 pcalc523 Solving an exponential equation by using logarithms: Decimal answers, advanced
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 pcalc802 Solving an exponential equation by using substitution and quadratic factoring
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc524 Finding the time in a word problem on compound interest
 pcalc508 Finding the time given an exponential function with base e that models a real-world situation
 pcalc525 Finding the final amount in a word problem on continuous compound interest
 pcalc526 Finding the final amount in a word problem on continuous exponential growth or decay
 pcalc527 Finding the initial amount in a word problem on continuous compound interest
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay
 pcalc528 Finding half-life or doubling time
 pcalc529 Writing and evaluating a function modeling continuous exponential growth or decay given doubling time or half-life
 pcalc530 Writing and evaluating a function modeling continuous exponential growth or decay given two outputs

B.46 Math Intervention

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith001 Addition without carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith660 Finding the value of a collection of coins
 arith661 Finding the value of a collection of bills and coins
 arith636 Subtracting a 1-digit number from a 2-digit number
 arith007 Subtraction without borrowing
 arith006 Subtraction with borrowing
 arith128 Adding or subtracting 10, 100, or 1000
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 arith008 One-digit multiplication
 arith679 Multiplication by 10, 100, and 1000
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith003 Multiplication without carry
 arith004 Multiplication with carry
 arith615 Introduction to multiplication of large numbers
 arith632 Multiplication with trailing zeros: Problem type 1
 arith638 Multiplication with trailing zeros: Problem type 2
 arith014 Multiplication of large numbers
 arith126 Multiplication as repeated addition
 arith639 Using multiplication to find the number of squares
 arith640 Using addition and multiplication to count the objects on a grid
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith075 Division facts
 arith052 Division without carry

arith005 Division with carry
 arith680 Division with trailing zeros: Problem type 1
 arith649 Division with trailing zeros: Problem type 2
 arith650 Division involving quotients with intermediate zeros
 arith616 Quotient and remainder: Problem type 1
 arith644 Word problem on quotient and remainder
 arith617 Quotient and remainder: Problem type 2
 arith631 Quotient and remainder: Problem type 3
 arith023 Word problem with division of whole numbers and rounding
 arith614 Word problem with multiplication or division of whole numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith651 Introduction to inequalities
 arith652 Comparing a numerical expression with a number
 arith077 Ordering large numbers
 arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith677 Estimating a product
 arith678 Estimating a quotient
 arith645 Introduction to parentheses
 arith681 Introduction to order of operations
 arith048 Order of operations with whole numbers
 arith646 Even and odd numbers
 arith647 Divisibility rules for 2, 5, and 10
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith655 Introduction to properties of addition
 arith656 Introduction to properties of multiplication
 arith653 Fact families for addition and subtraction
 arith654 Fact families for multiplication and division
 alge807 Finding the next terms of a sequence with whole numbers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith618 Addition or subtraction of fractions with the same denominator
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division

arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith020 Mixed number multiplication: Problem type 1

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith670 Converting a decimal to a fraction: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
arith222 Converting a fraction to a terminating decimal
arith672 Converting a decimal to a mixed number
arith624 Addition of aligned decimals
arith668 Addition with money
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith669 Subtraction with money
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith131 Estimating a decimal sum or difference
arith082 Multiplication of a decimal by a power of ten
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith628 Word problem with multiple decimal operations: Problem type 1
arith083 Division of a decimal by a power of ten
arith081 Division of a decimal by a whole number
arith019 Division of a decimal by a 2-digit decimal
arith064 Solving a word problem on proportions using a unit rate
arith674 Finding the percentage of a grid that is shaded
arith090 Converting a percentage to a fraction in simplest form
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith030 Finding a percentage of a whole number without a calculator: Basic

Geometry

geom151 Measuring an angle with the protractor
geom303 Acute, obtuse, and right angles
geom306 Acute, obtuse, and right triangles
geom001 Finding an angle measure of a triangle given two angles
geom300 Perimeter of a square or a rectangle
geom339 Perimeter of a polygon
geom221 Finding the missing length in a figure
geom866 Perimeter and area on a grid
geom019 Area of a square or a rectangle
geom350 Distinguishing between the area and perimeter of a rectangle
geom868 Classifying solids
geom311 Volume of a rectangular prism
geom354 Volume of a rectangular prism made of unit cubes
geom219 Nets of solids

Measurement and Data

mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat062 Reading a positive temperature from a thermometer
 mstat033 Measuring length to the nearest inch
 mstat035 Conversions involving measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 time010 Telling time
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time011 Introduction to elapsed time
 mstat005 Constructing a bar graph for non-numerical data
 mstat037 Constructing a line plot
 mstat056 Interpreting a tally table
 mstat057 Interpreting a pictograph table
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat031 Interpreting a stem-and-leaf plot
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event

Algebra

mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith231 Integer multiplication and division
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge281 Function tables with one-step rules
 alge282 Function tables with two-step rules
 mstat061 Describing an increasing or decreasing pattern from a table of values
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge280 Graphing a line in quadrant 1
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents

B.47 Mastery of SAT Math

Arithmetic Readiness

arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith801 Finding the LCD of two fractions
arith230 Addition or subtraction of fractions with different denominators
arith086 Product of a fraction and a whole number: Problem type 1
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith226 Converting between percentages and decimals
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith090 Converting a percentage to a fraction in simplest form
arith686 Writing a ratio as a percentage
mstat049 Computing a percentage from a table of values
arith698 Applying the percent equation
arith074 Finding the sale price without a calculator given the original price and percent discount
arith031 Finding the original price given the sale price and percent discount
arith225 Finding the percentage increase or decrease: Advanced
arith232 Finding simple interest without a calculator

Real Numbers

arith699 Writing a signed number for a real-world situation
mstat038 Reading the temperature from a thermometer
arith691 Ordering integers
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith116 Signed fraction addition or subtraction: Basic
arith231 Integer multiplication and division
arith822 Signed fraction multiplication: Basic
arith118 Order of operations with integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers

arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression
 alge187 Properties of addition
 alge188 Properties of real numbers

Linear Equations and Inequalities

alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge740 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge602 Writing a one-step variable expression for a real-world situation
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge829 Word problem involving distance, rate, and time
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line

alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge207 Solving a linear inequality: Problem type 4
 alge745 Solving a linear inequality: Problem type 5
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge748 Writing an inequality for a real-world situation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge270 Solving an absolute value equation of the form $a-x = b$ or $-x+a = b$
 alge103 Solving an absolute value equation of the form $-ax+b = c$
 alge170 Solving an absolute value inequality: Basic

Lines and Systems of Linear Equations

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x- and y-intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge079 Graphing a system of two linear inequalities: Basic

Exponents, Polynomials, and Quadratics

alge790 Evaluating expressions with exponents of zero
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
alge791 Rewriting an algebraic expression without a negative exponent
alge821 Understanding the product rule of exponents
alge024 Introduction to the product rule of exponents
alge030 Product rule with positive exponents: Multivariate
alge028 Product rule with negative exponents
alge827 Introduction to the quotient rule of exponents
alge026 Quotient of expressions involving exponents
alge755 Quotient rule with negative exponents: Problem type 1
alge826 Understanding the power rules of exponents
alge754 Introduction to the power rules of exponents
alge027 Power rules with positive exponents
alge025 Power of a power rule with negative exponents
alge799 Power rules with negative exponents
alge756 Power and product rules with positive exponents
arith029 Ordering numbers with positive exponents
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
scinot002 Multiplying and dividing numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge764 Multiplying conjugate binomials: Univariate
alge765 Multiplying binomials in two variables
alge032 Squaring a binomial: Univariate
alge180 Multiplication involving binomials and trinomials in two variables
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge039 Factoring a quadratic with leading coefficient 1
alge043 Factoring a perfect square trinomial
alge040 Factoring a quadratic with leading coefficient greater than 1
alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
alge041 Factoring a product of a quadratic trinomial and a monomial
alge624 Factoring a difference of squares
alge038 Factoring a polynomial by grouping: Problem type 1
alge181 Factoring a polynomial by grouping: Problem type 2
alge681 Solving an equation written in factored form
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
alge094 Completing the square
alge780 Solving a quadratic equation by completing the square: Exact answers
alge095 Applying the quadratic formula: Exact answers
alge214 Discriminant of a quadratic equation
alge703 Solving a word problem using a quadratic equation with rational roots
alge524 Solving a word problem using a quadratic equation with irrational roots
alge277 Finding the x-intercept(s) and the vertex of a parabola
pcalc775 Finding the maximum or minimum of a quadratic function
alge785 Word problem involving the maximum or minimum of a quadratic function
alge252 Graphing a parabola of the form $y = ax^2$

alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 alge702 Classifying the graph of a function
 alge723 How the leading coefficient affects the shape of a parabola
 alge830 Evaluating an exponential function that models a real-world situation
 alge112 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest

Functions and Sequences

set004 Set builder and interval notation
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 alge727 Checking if a formula describes a pattern
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 pcalc768 Finding the average rate of change of a function
 fun019 Sum, difference, and product of two functions
 fun022 Composition of two functions: Basic
 fun002 Graphing integer functions
 pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 pcalc114 Even and odd functions: Problem type 1
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge807 Finding the next terms of a sequence with whole numbers
 alge732 Finding patterns in shapes
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term

Rational and Radical Expressions

alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1

alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax, bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a, x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge272 Solving a proportion of the form $x/a = b/c$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators $a, x,$ or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear
 arith663 Writing ratios for real-world situations
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation
 alge772 Word problem on combined variation
 alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals

Perimeter, Area, and Volume

geom300 Perimeter of a square or a rectangle

geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alge724 Finding an area in terms of variables
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom805 Arc length and area of a sector of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of π
 geom841 Volume of a sphere
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom348 Vertices, edges, and faces of a solid
 geom031 Surface area of a cube or a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of π
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders

Lines, Angles, and Triangles

mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic008 Conditional statements and deductive reasoning
 geom349 Naming segments, rays, and lines
 geom525 Computing distances between decimals on the number line
 geom526 Midpoint of a number line segment
 geom521 Segment addition and midpoints
 geom358 Identifying parallel and perpendicular lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor

geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom304 Identifying corresponding and alternate angles
 geom305 Identifying supplementary and vertical angles
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom845 Using triangle inequality to determine possible lengths of a third side
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom044 Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom506 Special right triangles: Exact answers
 geom212 Circles inscribed in and circumscribed about regular polygons

Polygons, Circles, and Similarity

alge191 Midpoint of a line segment in the plane
 alge132 Distance between two points in the plane: Exact answers
 geom310 Properties of quadrilaterals
 geom523 Conditions for quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom834 Finding measures involving diagonals of rhombi
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon
 geom853 Interior and exterior angle measures in a regular polygon
 geom819 Finding coordinates of vertices of polygons
 geom818 Finding the coordinates of a point to make a parallelogram
 geom863 Congruence in the coordinate plane
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom511 Lengths of chords, secants, and tangents
 geom514 Inscribed angles of a circle
 geom512 Central angles and inscribed angles of a circle
 geom513 Angles of intersecting secants and tangents
 pcalc605 Graphing a circle given its equation in standard form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 geom359 Identifying congruent shapes on a grid
 geom520 Identifying and naming congruent triangles
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement

geom510 Triangles and parallel lines
 geom507 Right triangles and geometric mean
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2
 geom133 Ratio of volumes
 geom357 Identifying transformations
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom335 Rotating a figure about the origin
 geom815 Finding an angle of rotation
 geom831 Rotational and point symmetries
 geom336 Dilating a figure

Statistics and Probability

mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 mstat066 Weighted mean
 mstat025 Finding if a question can be answered by the data
 stat802 Rejecting unreasonable claims based on average statistics
 stat805 Making a reasonable inference based on proportion statistics
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.48 Math for College Readiness

Whole Numbers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith001 Addition without carry
arith635 Adding a 2-digit number and a 1-digit number with carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith128 Adding or subtracting 10, 100, or 1000
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
arith655 Introduction to properties of addition
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
arith003 Multiplication without carry
arith004 Multiplication with carry
arith632 Multiplication with trailing zeros: Problem type 1
arith615 Introduction to multiplication of large numbers
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith656 Introduction to properties of multiplication
arith075 Division facts
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith052 Division without carry
arith005 Division with carry
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith604 Estimating a product or quotient of whole numbers
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers

arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith657 Understanding the distributive property
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith240 Word problem with common multiples
alge925 Finding the next terms of an arithmetic sequence with whole numbers
alge933 Finding the next terms of a geometric sequence with whole numbers
alge732 Finding patterns in shapes
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge009 Additive property of equality with whole numbers
alge008 Multiplicative property of equality with whole numbers
alge803 Using two steps to solve an equation with whole numbers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction

arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1

Decimals

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith135 Word problem with multiplication of a decimal and a whole number

arith137 Word problem with multiplication of two decimals
arith224 Word problem with decimal addition and multiplication
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith227 Word problem with decimal subtraction and division
alge823 Solving a one-step word problem using the formula $d = rt$
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith609 Ordering fractions and decimals
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith733 Using a calculator to convert a fraction to a rounded decimal
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith732 Converting a fraction or mixed number to a rounded decimal
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith748 Addition or subtraction with a decimal and a mixed number
arith749 Multiplication with a decimal and a fraction

Ratios, Proportions, and Percents

arith823 Writing ratios using different notations
arith663 Writing ratios for real-world situations
arith824 Simplifying a ratio of whole numbers: Problem type 1
arith825 Simplifying a ratio of decimals
arith827 Finding a unit price
arith828 Computing unit prices to find the better buy
arith064 Solving a word problem on proportions using a unit rate
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge272 Solving a proportion of the form $x/a = b/c$
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
alge063 Word problem on mixed number proportions
arith045 Word problem with powers of ten
arith836 Converting a fraction with a denominator of 100 to a percentage
arith837 Converting a percentage to a fraction with a denominator of 100
arith674 Finding the percentage of a grid that is shaded
arith723 Introduction to converting a percentage to a decimal
arith833 Introduction to converting a decimal to a percentage
arith834 Converting between percentages and decimals
arith841 Converting a mixed number percentage to a decimal
arith835 Converting between percentages and decimals in a real-world situation
arith090 Converting a percentage to a fraction in simplest form
arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage

arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 mstat049 Computing a percentage from a table of values
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 alge741 Finding the final amount in a word problem on compound interest
 arith854 Computing a percent mixture

Geometry

geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom358 Identifying parallel and perpendicular lines
 geom349 Naming segments, rays, and lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom305 Identifying supplementary and vertical angles
 geom304 Identifying corresponding and alternate angles
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter

geom217 Finding the side length of a rectangle given its perimeter or area
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom344 Area involving rectangles and triangles
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom841 Volume of a sphere
 geom219 Nets of solids
 geom816 Side views of a solid made of cubes
 geom031 Surface area of a cube or a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom842 Surface area of a sphere
 arith016 Square root of a perfect square
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom359 Identifying congruent shapes on a grid
 geom520 Identifying and naming congruent triangles
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement

Measurement

mstat059 Choosing U.S. Customary measurement units
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values

unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time006 Adding time
 time007 Elapsed time
 arith063 Word problem with clocks
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Data Analysis and Statistics

mstat056 Interpreting a tally table
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat007 Interpreting a line graph
 mstat031 Interpreting a stem-and-leaf plot
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 mstat025 Finding if a question can be answered by the data
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 arith103 Average of two numbers
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability

mstat046 Experimental and theoretical probability
mstat047 Introduction to expectation
mstat012 Probability of independent events
mstat013 Probability of dependent events
mstat032 Probability of the union of two events

Real Numbers

alge286 Plotting integers on a number line
arith605 Plotting rational numbers on a number line
mstat038 Reading the temperature from a thermometer
arith699 Writing a signed number for a real-world situation
arith691 Ordering integers
arith712 Ordering real numbers
arith071 Absolute value of a number
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
arith104 Operations with absolute value: Problem type 2
unit052 Finding the absolute error and percent error of a measurement
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
arith696 Complex fraction without variables: Problem type 2
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation

Algebraic Expressions and Equations

alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge004 Evaluating a quadratic expression: Integers

alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge432 Introduction to adding fractions with variables and common denominators
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge437 Adding rational expressions with denominators ax and bx : Basic
 alge187 Properties of addition
 alge188 Properties of real numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge218 Solving a word problem involving rates and time conversion
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge842 Solving a word problem involving consecutive integers
 geom530 Solving equations involving vertical angles

geom531 Solving equations involving angles and a pair of parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios

Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2

Graphs of Linear Equations

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge191 Midpoint of a line segment in the plane
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge954 Graphing a parabola of the form $y = ax^2$
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y -intercept
 alge196 Graphing a line through a given point with a given slope
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge263 Interpreting the graphs of two functions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations

alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation

Exponents and Polynomials

alge758 Degree and leading coefficient of a univariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 arith029 Ordering numbers with positive exponents
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge605 Factoring a linear binomial
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 alge791 Rewriting an algebraic expression without a negative exponent
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents

alge755 Quotient rule with negative exponents: Problem type 1
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 alge413 Finding all square roots of a number
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 alge533 Square root addition or subtraction with three terms

B.49 Mathematics for College Readiness (Segment 1)

Module 1: Expressions and Equations

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith697 Mixed arithmetic operations with fractions
 arith095 Multi-step word problem involving fractions and multiplication
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith085 Addition or subtraction of mixed numbers with different denominators

arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith064 Solving a word problem on proportions using a unit rate
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
arith226 Converting between percentages and decimals
arith090 Converting a percentage to a fraction in simplest form
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith069 Writing a ratio as a percentage without a calculator
arith030 Finding a percentage of a whole number without a calculator: Basic
arith698 Applying the percent equation
arith074 Finding the sale price without a calculator given the original price and percent discount
arith031 Finding the original price given the sale price and percent discount
arith225 Finding the percentage increase or decrease: Advanced
arith232 Finding simple interest without a calculator
mstat038 Reading the temperature from a thermometer
arith699 Writing a signed number for a real-world situation
alge286 Plotting integers on a number line
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith016 Square root of a perfect square
arith712 Ordering real numbers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith116 Signed fraction addition or subtraction: Basic
arith106 Signed fraction addition or subtraction: Advanced
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
alge984 Classifying sums and products as rational or irrational
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction

alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression
 alge733 Writing a one-step expression for a real-world situation
 alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution

Module 2: Numbers and Quantities

alge002 Identifying numbers as rational or irrational
 alge001 Identifying numbers as integers or non-integers
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1

alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith602 Estimating a square root
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement

Module 3: Arithmetic with Polynomials and Rational Expressions

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1

alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax, bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a, x+b$
 alge661 Adding rational expressions involving different quadratic denominators

Module 4: Creating Equations

alge208 Solving a two-step equation with signed fractions
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge016 Translating a sentence into a one-step equation
 alge186 Translating a sentence into a compound inequality
 alge729 Writing a multi-step inequality for a real-world situation
 alge730 Writing a multi-step equation for a real-world situation
 alge748 Writing an inequality for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge841 Translating a sentence into a multi-step equation
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles

geom337 Indirect measurement
 alge822 Writing an inequality given a graph on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge017 Graphing a linear inequality on the number line
 alge166 Graphing a compound inequality on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides

Module 5: Reasoning with Equations

alge014 Solving a word problem with two unknowns using a linear equation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs

alge891 Rewriting a linear equation in the form $Ax + By = C$
alge884 Finding x - and y -intercepts given the graph of a line on a grid
alge924 Finding x - and y -intercepts of a line given the equation: Basic
alge210 Finding x - and y -intercepts of a line given the equation: Advanced
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
alge892 Writing an equation and graphing a line given its slope and y -intercept
alge070 Writing an equation of a line given the y -intercept and another point
alge893 Writing an equation in slope-intercept form given the slope and a point
alge894 Writing an equation in point-slope form given the slope and a point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
mstat052 Identifying independent and dependent variables from equations or real-world situations
alge990 Domain and range of a linear function that models a real-world situation
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge895 Identifying parallel and perpendicular lines from equations
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
alge991 Solving a linear equation by graphing
mstat051 Choosing a graph to fit a narrative: Advanced
alge828 Interpreting direct variation from a graph
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge914 Identifying solutions to a system of linear equations
alge075 Classifying systems of linear equations from graphs
alge725 Graphically solving a system of linear equations
alge751 Solving a system of linear equations using substitution
alge915 Solving a system of linear equations using elimination with addition
alge076 Solving a system of linear equations using elimination with multiplication and addition
alge916 Solving a system of linear equations with fractional coefficients
alge917 Solving a system of linear equations with decimal coefficients
alge752 Solving a 2×2 system of linear equations that is inconsistent or consistent dependent
alge753 Solving a 3×3 system of linear equations: Problem type 1
alge988 Identifying the operations used to create equivalent systems of equations
alge263 Interpreting the graphs of two functions
alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
alge184 Solving a value mixture problem using a system of linear equations
alge224 Solving a distance, rate, time problem using a system of linear equations
alge192 Solving a percent mixture problem using a system of linear equations
alge172 Solving a tax rate or interest rate problem using a system of linear equations
alge793 Solving a word problem using a 3×3 system of linear equations: Problem type 1
alge912 Identifying solutions to a linear inequality in two variables
alge720 Graphing a linear inequality in the plane: Slope-intercept form
alge018 Graphing a linear inequality in the plane: Standard form
alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
alge079 Graphing a system of two linear inequalities: Basic
alge922 Graphing a system of three linear inequalities
pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators

alge769 Solving a rational equation that simplifies to linear: Denominators a, x, or ax
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals

Extra Material

alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge778 Using i to rewrite square roots of negative numbers
 pcalc051 Solving a quadratic equation with complex roots
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle

geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom031 Surface area of a cube or a rectangular prism
geom091 Surface area of a triangular prism
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom842 Surface area of a sphere
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere
geom039 Finding supplementary and complementary angles
set001 Set builder notation
set002 Union and intersection of finite sets
fun033 Variable expressions as inputs of functions: Problem type 1
fun016 Domain and range from ordered pairs
alge896 Graphing an integer function and finding its range for a given domain
fun032 Identifying functions from relations
fun010 Vertical line test
pcalc761 Finding inputs and outputs of a function from its graph
alge999 Finding where a function is increasing, decreasing, or constant given the graph
pcalc752 Finding local maxima and minima of a function given the graph
fun006 Writing a function rule given a table of ordered pairs: Two-step rules
alge716 Introduction to the composition of two functions
fun012 Inverse functions: Linear, discrete
alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
alge058 Complex fraction involving multivariate monomials
alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
alge080 Simplifying a radical expression with an even exponent
alge084 Simplifying a sum or difference of radical expressions: Multivariate
alge086 Rationalizing the denominator of a radical expression
alge088 Rationalizing the denominator of a radical expression using conjugates
alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
alge132 Distance between two points in the plane: Exact answers
alge168 Graphing an absolute value equation in the plane: Advanced
alge175 Word problem on direct variation
alge176 Word problem on inverse variation
alge185 Writing an equation for a function after a vertical translation
alge191 Midpoint of a line segment in the plane
alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
alge213 Domain of a square root function
alge220 Word problem on inverse proportions
alge249 Rational exponents: Powers of powers with negative exponents
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge251 Rational exponents: Negative exponents and fractional bases
alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
alge262 Graphing a cubic function of the form $y = ax^3$
alge264 Square root of a perfect square monomial
alge273 Simplifying a higher root of a whole number
alge275 Simplifying a radical expression with two variables
alge276 Simplifying a product involving square roots using the distributive property: Advanced
alge640 Simplifying a product of radical expressions: Multivariate
alge702 Classifying the graph of a function
alge723 How the leading coefficient affects the shape of a parabola
alge767 Complex fraction: GCF and quadratic factoring
alge768 Complex fraction made of sums involving rational expressions
alge770 Solving a work problem using a rational equation
alge773 Rational exponents: Products and quotients with negative exponents
alge774 Special products of radical expressions: Conjugates and squaring

alge785 Word problem involving the maximum or minimum of a quadratic function
alge811 Simplifying a higher radical expression: Multivariate
alge812 Converting between radical form and exponent form
alge864 Solving an absolute value equation: Problem type 1
alge865 Solving an absolute value equation: Problem type 2
alge866 Solving an absolute value equation: Problem type 3
alge867 Solving an absolute value equation: Problem type 4
alge868 Solving an absolute value inequality: Problem type 1
alge869 Solving an absolute value inequality: Problem type 2
alge870 Solving an absolute value inequality: Problem type 3
alge871 Solving an absolute value inequality: Problem type 4
alge872 Solving an absolute value inequality: Problem type 5
alge898 Translating the graph of an absolute value function: One step
alge899 Translating the graph of an absolute value function: Two steps
alge900 Graphing an absolute value equation in the plane: Basic
alge901 How the leading coefficient affects the graph of an absolute value function
alge902 Identifying direct and inverse variation from ordered pairs and writing equations
alge903 Identifying direct and inverse variation equations
alge904 Writing a direct variation equation
alge905 Writing an inverse variation equation
alge906 Finding the next terms of an arithmetic sequence with integers
alge907 Finding the next terms of a geometric sequence with signed numbers
alge908 Finding the first terms of a sequence using a recursive rule
alge909 Writing an explicit rule for an arithmetic sequence
alge910 Writing a recursive rule for an arithmetic sequence
alge911 Writing recursive rules for arithmetic and geometric sequences
alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
alge921 Graphing a system of two linear inequalities: Advanced
alge925 Finding the next terms of an arithmetic sequence with whole numbers
alge931 Finding a specified term of an arithmetic sequence given the first terms
alge933 Finding the next terms of a geometric sequence with whole numbers
alge934 Finding a specified term of a geometric sequence given the first terms
alge938 Identifying direct variation from ordered pairs and writing equations
alge943 Writing an absolute value inequality given a graph on the number line
alge953 Translating the graph of a parabola: One step
alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
alge955 Graphing a parabola of the form $y = ax^2 + c$
alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
alge975 Domain and range from the graph of a parabola
alge976 Range of a quadratic function
alge979 Identifying arithmetic sequences and finding the common difference
alge980 Identifying geometric sequences and finding the common ratio
alge981 Identifying arithmetic and geometric sequences
alge982 Identifying direct variation equations
alge994 Graphically solving a system of linear and quadratic equations
alge995 Solving a system of linear and quadratic equations
alge996 Comparing properties of quadratic functions given in different forms
alge997 Finding the average rate of change of a function given its equation
alge998 Finding the average rate of change of a function given its graph
arith032 Square root addition or subtraction
arith039 Square root multiplication: Advanced
arith093 Simplifying the square root of a whole number less than 100
arith094 Cube root of an integer
arith601 Square root of a rational perfect square
arith612 Word problem involving multiple rates
arith695 Complex fraction without variables: Problem type 1
arith696 Complex fraction without variables: Problem type 2
fun020 Writing an equation for a function after a vertical and horizontal translation
fun030 Evaluating a piecewise-defined function
fun031 Graphing a piecewise-defined function: Problem type 1
geom044 Pythagorean Theorem

geom814 Angle measure in a circle graph
mstat001 Mean of a data set
mstat003 Mode of a data set
mstat004 Constructing a histogram for numerical data
mstat006 Constructing a box-and-whisker plot
mstat007 Interpreting a line graph
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
mstat010 Probability of an event
mstat011 Area as probability
mstat012 Probability of independent events
mstat013 Probability of dependent events
mstat015 Counting principle
mstat017 Computing permutations and combinations
mstat023 Scatter plots and correlation
mstat024 Interpreting a bar graph
mstat025 Finding if a question can be answered by the data
mstat026 Introduction to the probability of an event
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat030 Sketching the line of best fit
mstat031 Interpreting a stem-and-leaf plot
mstat032 Probability of the union of two events
mstat037 Constructing a line plot
mstat040 Introduction to the counting principle
mstat041 Interpreting a tree diagram
mstat042 Interpreting a Venn diagram of 2 sets
mstat043 Interpreting a Venn diagram of 3 sets
mstat044 Interpreting a double bar graph
mstat046 Experimental and theoretical probability
mstat047 Introduction to expectation
mstat048 Odds of an event
mstat049 Computing a percentage from a table of values
mstat053 Choosing the best measure to describe data
mstat055 Finding the mode and range of a data set
mstat066 Weighted mean
mstat067 Approximating the equation of a line of best fit and making predictions
mstat068 Predictions from the line of best fit
mstat069 Computing residuals
mstat070 Interpreting residual plots
mstat071 Linear relationship and the correlation coefficient
mstat072 Five-number summary and interquartile range
mstat073 Using box-and-whisker plots to compare data sets
mstat074 Identifying correlation and causation
pcalc037 Scalar multiplication of a matrix
pcalc038 Addition or subtraction of matrices
pcalc082 Factorial expressions
pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
pcalc108 Graphing a rational function: Constant or linear over linear
pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
pcalc607 Using a trigonometric ratio to find a side length in a right triangle
pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
pcalc610 Using trigonometry to find a length in a word problem with one right triangle
pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
pcalc616 Using a calculator to approximate sine, cosine, and tangent values
pcalc642 Solving a right triangle
pcalc712 Gauss-Jordan elimination with a 2x2 matrix
pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
pcalc740 Linear combination of matrices

pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 pcalc775 Finding the maximum or minimum of a quadratic function
 pcalc781 Graphing a square root function
 pcalc789 Finding the asymptotes of a rational function: Basic
 stat009 Percentiles
 stat020 Calculating relative frequencies in a contingency table
 stat021 Population standard deviation
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 stat790 Permutations, combinations, and the multiplication principle for counting
 stat801 Computations from a circle graph
 stat802 Rejecting unreasonable claims based on average statistics
 stat804 Interpreting a circle graph or pie chart
 stat805 Making a reasonable inference based on proportion statistics
 unit001 Metric distance conversion with whole number values
 unit005 U.S. Customary unit conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 fun019 Sum, difference, and product of two functions
 pcalc114 Even and odd functions: Problem type 1
 pcalc633 Amplitude and period of sine and cosine functions
 pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps

B.50 Mathematics for College Readiness (Segment 2)

Module 6: Seeing Structure in Expressions

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith108 Integer addition: Problem type 2
 arith689 Integer subtraction: Problem type 2
 arith116 Signed fraction addition or subtraction: Basic
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith093 Simplifying the square root of a whole number less than 100
 alge006 Solving a two-step equation with integers
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge790 Evaluating expressions with exponents of zero
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 alge791 Rewriting an algebraic expression without a negative exponent
 alge030 Product rule with positive exponents: Multivariate
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge027 Power rules with positive exponents

alge025 Power of a power rule with negative exponents
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge032 Squaring a binomial: Univariate
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge039 Factoring a quadratic with leading coefficient 1
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge094 Completing the square
 alge946 Factoring a perfect square trinomial in two variables
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge778 Using i to rewrite square roots of negative numbers
 pcalc051 Solving a quadratic equation with complex roots
 alge971 Table for an exponential function
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge741 Finding the final amount in a word problem on compound interest
 alge993 Comparing linear, polynomial, and exponential functions

Module 7: Building and Interpreting Functions

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 pcalc114 Even and odd functions: Problem type 1
 fun019 Sum, difference, and product of two functions
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept

alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y -intercept
 alge070 Writing an equation of a line given the y -intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge828 Interpreting direct variation from a graph
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge991 Solving a linear equation by graphing
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge702 Classifying the graph of a function
 alge723 How the leading coefficient affects the shape of a parabola
 alge975 Domain and range from the graph of a parabola
 alge974 Finding the vertex, x -intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x -intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge957 Solving a quadratic equation by graphing
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge953 Translating the graph of a parabola: One step
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps

fun012 Inverse functions: Linear, discrete
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 alge716 Introduction to the composition of two functions
 alge992 Combining functions to write a new function that models a real-world situation
 alge830 Evaluating an exponential function that models a real-world situation
 alge968 Writing an equation that models exponential growth or decay
 alge966 Finding the initial amount and rate of change given an exponential function
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear
 pcalc633 Amplitude and period of sine and cosine functions
 pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1

Module 8: Expressing Geometric Properties with Equations

geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom039 Finding supplementary and complementary angles
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane

Module 9: The Real Number System

alge984 Classifying sums and products as rational or irrational
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents

Module 10: Interpreting Categorical and Quantitative Data

mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation

Extra

arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge015 Translating a sentence by using an inequality symbol
 alge016 Translating a sentence into a one-step equation

alge186 Translating a sentence into a compound inequality
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge729 Writing a multi-step inequality for a real-world situation
alge730 Writing a multi-step equation for a real-world situation
alge748 Writing an inequality for a real-world situation
alge831 Translating a phrase into a one-step expression
alge841 Translating a sentence into a multi-step equation
alge845 Translating a sentence into a one-step inequality
alge846 Translating a sentence into a multi-step inequality
alge897 Writing and evaluating a function that models a real-world situation: Advanced
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith101 Estimating a sum of whole numbers
arith233 Introduction to exponents
arith692 Writing expressions using exponents
arith683 Power of 10: Positive exponent
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
alge731 Evaluating an algebraic expression: Whole numbers with two operations
alge832 Evaluating an algebraic expression: Whole number operations and exponents
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals

arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
mstat038 Reading the temperature from a thermometer
arith699 Writing a signed number for a real-world situation
alge286 Plotting integers on a number line
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith712 Ordering real numbers
arith200 Integer addition: Problem type 1
arith688 Integer subtraction: Problem type 1
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith106 Signed fraction addition or subtraction: Advanced
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith231 Integer multiplication and division
arith105 Signed fraction multiplication: Advanced
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
arith071 Absolute value of a number
arith104 Operations with absolute value: Problem type 2
geom525 Computing distances between decimals on the number line
alge187 Properties of addition
alge188 Properties of real numbers
arith657 Understanding the distributive property
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
alge663 Combining like terms: Advanced
alge293 Combining like terms in a quadratic expression
alge009 Additive property of equality with whole numbers
alge801 Additive property of equality with fractions and mixed numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers
alge266 Additive property of equality with a negative coefficient
alge836 Additive property of equality with signed fractions
alge008 Multiplicative property of equality with whole numbers
alge820 Multiplicative property of equality with fractions
alge825 Multiplicative property of equality with decimals
alge797 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge803 Using two steps to solve an equation with whole numbers
alge837 Solving a multi-step equation given in fractional form
alge208 Solving a two-step equation with signed fractions
alge824 Solving a two-step equation with signed decimals
alge200 Solving an equation to find the value of an expression

alge920 Introduction to solving an equation with parentheses
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge986 Identifying properties used to solve a linear equation
alge810 Introduction to algebraic symbol manipulation
alge743 Algebraic symbol manipulation: Problem type 1
alge744 Algebraic symbol manipulation: Problem type 2
alge733 Writing a one-step expression for a real-world situation
alge291 Translating a phrase into a two-step expression
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge014 Solving a word problem with two unknowns using a linear equation
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
stat803 Finding the value for a new score that will yield a given mean
arith663 Writing ratios for real-world situations
alge272 Solving a proportion of the form $x/a = b/c$
alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
arith064 Solving a word problem on proportions using a unit rate
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
arith226 Converting between percentages and decimals
arith090 Converting a percentage to a fraction in simplest form
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith069 Writing a ratio as a percentage without a calculator
arith030 Finding a percentage of a whole number without a calculator: Basic
arith698 Applying the percent equation
arith074 Finding the sale price without a calculator given the original price and percent discount
arith031 Finding the original price given the sale price and percent discount
arith225 Finding the percentage increase or decrease: Advanced
arith232 Finding simple interest without a calculator
unit005 U.S. Customary unit conversion with whole number values
unit001 Metric distance conversion with whole number values
unit034 Converting between metric and U.S. Customary unit systems
alge864 Solving an absolute value equation: Problem type 1
alge865 Solving an absolute value equation: Problem type 2
alge866 Solving an absolute value equation: Problem type 3
alge867 Solving an absolute value equation: Problem type 4
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge166 Graphing a compound inequality on the number line
alge847 Writing a compound inequality given a graph on the number line
alge844 Identifying solutions to a two-step linear inequality in one variable
alge848 Additive property of inequality with whole numbers
alge849 Additive property of inequality with integers

alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line

alge079 Graphing a system of two linear inequalities: Basic
alge921 Graphing a system of two linear inequalities: Advanced
alge922 Graphing a system of three linear inequalities
pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
pcalc037 Scalar multiplication of a matrix
pcalc038 Addition or subtraction of matrices
pcalc740 Linear combination of matrices
pcalc712 Gauss-Jordan elimination with a 2x2 matrix
arith684 Power of 10: Negative exponent
arith043 Evaluating an expression with a negative exponent: Negative integer base
arith029 Ordering numbers with positive exponents
arith024 Ordering numbers with negative exponents
alge821 Understanding the product rule of exponents
alge024 Introduction to the product rule of exponents
alge961 Introduction to the product rule with negative exponents
alge026 Quotient of expressions involving exponents
alge926 Quotient rule with negative exponents: Problem type 2
alge826 Understanding the power rules of exponents
alge754 Introduction to the power rules of exponents
alge799 Power rules with negative exponents
alge756 Power and product rules with positive exponents
alge927 Power and quotient rules with positive exponents
alge928 Power and quotient rules with negative exponents: Problem type 1
alge929 Power and quotient rules with negative exponents: Problem type 2
alge757 Power, product, and quotient rules with negative exponents
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
scinot002 Multiplying and dividing numbers written in scientific notation
alge933 Finding the next terms of a geometric sequence with whole numbers
alge907 Finding the next terms of a geometric sequence with signed numbers
alge981 Identifying arithmetic and geometric sequences
alge980 Identifying geometric sequences and finding the common ratio
alge934 Finding a specified term of a geometric sequence given the first terms
pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
alge911 Writing recursive rules for arithmetic and geometric sequences
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge029 Simplifying a sum or difference of three univariate polynomials
alge932 Simplifying a sum or difference of multivariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge081 Multiplying conjugate binomials: Multivariate
alge068 Squaring a binomial: Multivariate
alge973 Multiplying binomials with negative coefficients
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge763 Polynomial long division: Problem type 3
alge985 Closure properties of integers and polynomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge930 Greatest common factor of three univariate monomials
alge739 Factoring out a monomial from a polynomial: Multivariate
alge949 Factoring out a binomial from a polynomial: GCF factoring, basic

alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle
 alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax, bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a, x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators $a, x,$ or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 mstat037 Constructing a line plot
 stat801 Computations from a circle graph

geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.51 Math for College Success

Arithmetic Readiness

arith692 Writing expressions using exponents
 arith233 Introduction to exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers

arith240 Word problem with common multiples
arith064 Solving a word problem on proportions using a unit rate
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith813 Multiplication of 3 fractions
arith821 Exponents and fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith819 Word problem involving fractions and division
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
arith013 Decimal addition with 3 numbers
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith082 Multiplication of a decimal by a power of ten
arith752 Estimating a product of decimals
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith137 Word problem with multiplication of two decimals

arith224 Word problem with decimal addition and multiplication
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith138 Word problem with division of two decimals
arith227 Word problem with decimal subtraction and division
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith836 Converting a fraction with a denominator of 100 to a percentage
arith837 Converting a percentage to a fraction with a denominator of 100
arith723 Introduction to converting a percentage to a decimal
arith833 Introduction to converting a decimal to a percentage
arith834 Converting between percentages and decimals
arith841 Converting a mixed number percentage to a decimal
arith835 Converting between percentages and decimals in a real-world situation
arith090 Converting a percentage to a fraction in simplest form
arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage
arith842 Converting a fraction to a percentage in a real-world situation
mstat003 Mode of a data set
arith103 Average of two numbers
mstat001 Mean of a data set
mstat028 Mean and median of a data set
mstat066 Weighted mean
mstat024 Interpreting a bar graph
mstat007 Interpreting a line graph
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom618 Perimeter of a polygon involving mixed numbers and fractions
geom078 Sides of polygons having the same perimeter
geom019 Area of a square or a rectangle
geom350 Distinguishing between the area and perimeter of a rectangle
geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone

geom841 Volume of a sphere
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom842 Surface area of a sphere
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles

Real Numbers and Algebraic Expressions

arith687 Fractional position on a number line
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 alge286 Plotting integers on a number line
 arith605 Plotting rational numbers on a number line
 arith699 Writing a signed number for a real-world situation
 arith092 Using a common denominator to order fractions
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith609 Ordering fractions and decimals
 arith691 Ordering integers
 arith016 Square root of a perfect square
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 arith712 Ordering real numbers
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith755 Addition and subtraction with 4 or 5 integers
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith711 Division involving zero
 alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith750 Signed decimal multiplication
 arith751 Signed decimal division
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction

alge004 Evaluating a quadratic expression: Integers
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 arith657 Understanding the distributive property
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)/b = c/d$

alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
alge016 Translating a sentence into a one-step equation
alge841 Translating a sentence into a multi-step equation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge014 Solving a word problem with two unknowns using a linear equation
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge730 Writing a multi-step equation for a real-world situation
alge794 Solving a value mixture problem using a linear equation
alge823 Solving a one-step word problem using the formula $d = rt$
alge218 Solving a word problem involving rates and time conversion
alge796 Solving a distance, rate, time problem using a linear equation
mstat065 Converting between temperatures in Fahrenheit and Celsius
geom217 Finding the side length of a rectangle given its perimeter or area
geom817 Finding a side length given the perimeter and side lengths with variables
geom143 Finding the perimeter or area of a rectangle given one of these values
geom218 Finding the radius or the diameter of a circle given its circumference
geom530 Solving equations involving vertical angles
geom001 Finding an angle measure of a triangle given two angles
geom623 Finding angle measures of a triangle given angles with variables
geom502 Finding angle measures of a right or isosceles triangle given angles with variables
geom812 Finding an angle measure given extended triangles
geom813 Finding an angle measure given a triangle and parallel lines
stat803 Finding the value for a new score that will yield a given mean
arith840 Finding a percentage of a whole number
arith030 Finding a percentage of a whole number without a calculator: Basic
arith844 Finding a percentage of a whole number without a calculator: Advanced
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith845 Finding a percentage of a total amount: Real-world situations
arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
arith857 Estimating a tip without a calculator
arith069 Writing a ratio as a percentage without a calculator
mstat049 Computing a percentage from a table of values
arith850 Finding the rate of a tax or commission
arith849 Finding the total amount given the percentage of a partial amount
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith854 Computing a percent mixture
alge795 Solving a percent mixture problem using a linear equation
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph

stat801 Computations from a circle graph
 arith232 Finding simple interest without a calculator

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set004 Set builder and interval notation
 set002 Union and intersection of finite sets
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge747 Solving a compound linear inequality: Interval notation
 alge868 Solving an absolute value inequality: Problem type 1
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides

Lines and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge191 Midpoint of a line segment in the plane
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line

alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge991 Solving a linear equation by graphing
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 fun024 Domain and range from the graph of a continuous function

alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2×2 system of linear equations that is inconsistent or consistent dependent
 alge988 Identifying the operations used to create equivalent systems of equations
 alge753 Solving a 3×3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3×3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1

Exponents

alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents

alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 arith853 Introduction to compound interest
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge993 Comparing linear, polynomial, and exponential functions

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients

alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge605 Factoring a linear binomial
 alge736 Introduction to the GCF of two monomials
 alge930 Greatest common factor of three univariate monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 alge715 Domain of a rational function: Excluded values
 alge454 Simplifying a ratio of factored polynomials: Linear factors
 alge455 Simplifying a ratio of factored polynomials: Factors with exponents
 alge456 Simplifying a ratio of polynomials using GCF factoring

alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
alge710 Simplifying a ratio of polynomials: Problem type 1
alge682 Simplifying a ratio of polynomials: Problem type 2
alge459 Simplifying a ratio of polynomials: Problem type 3
alge034 Simplifying a ratio of multivariate polynomials
alge053 Multiplying rational expressions involving multivariate monomials
alge460 Multiplying rational expressions made up of linear expressions
alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
alge462 Multiplying rational expressions involving multivariate quadratics
alge054 Dividing rational expressions involving multivariate monomials
alge463 Dividing rational expressions involving linear expressions
alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
alge465 Dividing rational expressions involving multivariate quadratics
alge466 Multiplication and division of 3 rational expressions
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
alge428 Finding the LCD of rational expressions with linear denominators: Common factors
alge429 Finding the LCD of rational expressions with quadratic denominators
alge430 Writing equivalent rational expressions with monomial denominators
alge431 Writing equivalent rational expressions with polynomial denominators
alge304 Writing equivalent rational expressions involving opposite factors
alge432 Introduction to adding fractions with variables and common denominators
alge433 Adding rational expressions with common denominators and monomial numerators
alge056 Adding rational expressions with common denominators and binomial numerators
alge434 Adding rational expressions with common denominators and GCF factoring
alge435 Adding rational expressions with common denominators and quadratic factoring
alge436 Adding rational expressions with different denominators and a single occurrence of a variable
alge437 Adding rational expressions with denominators ax and bx : Basic
alge438 Adding rational expressions with denominators ax and bx : Advanced
alge439 Adding rational expressions with denominators axn and bxm
alge440 Adding rational expressions with multivariate monomial denominators: Basic
alge226 Adding rational expressions with multivariate monomial denominators: Advanced
alge441 Adding rational expressions with linear denominators without common factors: Basic
alge442 Adding rational expressions with linear denominators without common factors: Advanced
alge443 Adding rational expressions with linear denominators with common factors: Basic
alge444 Adding rational expressions with linear denominators with common factors: Advanced
alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
alge661 Adding rational expressions involving different quadratic denominators
alge446 Adding 3 rational expressions with different quadratic denominators
arith695 Complex fraction without variables: Problem type 1
arith696 Complex fraction without variables: Problem type 2
alge470 Complex fraction involving univariate monomials
alge058 Complex fraction involving multivariate monomials
alge471 Complex fraction: GCF factoring
alge472 Complex fraction: Quadratic factoring
alge473 Complex fraction made of sums involving rational expressions: Problem type 1
alge474 Complex fraction made of sums involving rational expressions: Problem type 2
alge475 Complex fraction made of sums involving rational expressions: Problem type 3
alge476 Complex fraction made of sums involving rational expressions: Problem type 4
alge477 Complex fraction made of sums involving rational expressions: Problem type 5
alge478 Complex fraction made of sums involving rational expressions: Problem type 6
alge479 Complex fraction made of sums involving rational expressions: Multivariate
alge480 Complex fraction with negative exponents: Problem type 1
alge481 Complex fraction with negative exponents: Problem type 2
alge162 Complex fraction that contains a complex fraction
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$

alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
 alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
 alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
 alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
 alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom838 Circumference ratios
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge450 Solving a distance, rate, time problem using a rational equation
 alge059 Ordering fractions with variables
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation

Radicals

alge413 Finding all square roots of a number
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 arith094 Cube root of an integer
 alge549 Finding n th roots of perfect n th powers with signs
 arith768 Finding the n th root of a perfect n th power fraction

alge550 Finding the n th root of a perfect n th power monomial
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
alge275 Simplifying a radical expression with two variables
alge273 Simplifying a higher root of a whole number
alge551 Introduction to simplifying a higher radical expression
alge552 Simplifying a higher radical expression: Univariate
alge811 Simplifying a higher radical expression: Multivariate
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
alge533 Square root addition or subtraction with three terms
alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
alge532 Simplifying a sum or difference of radical expressions: Univariate
alge084 Simplifying a sum or difference of radical expressions: Multivariate
alge554 Simplifying a sum or difference of higher roots
alge555 Simplifying a sum or difference of higher radical expressions
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
arith039 Square root multiplication: Advanced
alge522 Introduction to simplifying a product of radical expressions: Univariate
alge523 Simplifying a product of radical expressions: Univariate
alge640 Simplifying a product of radical expressions: Multivariate
alge556 Introduction to simplifying a product of higher roots
alge557 Simplifying a product of higher radical expressions
alge525 Introduction to simplifying a product involving square roots using the distributive property
alge526 Simplifying a product involving square roots using the distributive property: Basic
alge276 Simplifying a product involving square roots using the distributive property: Advanced
alge774 Special products of radical expressions: Conjugates and squaring
alge984 Classifying sums and products as rational or irrational
arith766 Simplifying a quotient of square roots
alge530 Simplifying a quotient involving a sum or difference with a square root
alge527 Rationalizing a denominator: Quotient involving square roots
alge528 Rationalizing a denominator: Square root of a fraction
alge529 Rationalizing a denominator: Quotient involving a monomial
alge534 Rationalizing a denominator using conjugates: Integer numerator
alge535 Rationalizing a denominator using conjugates: Square root in numerator
alge536 Rationalizing a denominator using conjugates: Variable in denominator
alge564 Rationalizing a denominator: Quotient involving a higher radical
alge400 Introduction to solving a radical equation
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
alge411 Solving a radical equation with a quadratic expression under the radical
alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
alge410 Solving an equation with a root index greater than 2: Problem type 1
alge417 Solving an equation with a root index greater than 2: Problem type 2
alge412 Algebraic symbol manipulation with radicals
alge542 Word problem involving radical equations: Basic
alge409 Word problem involving radical equations: Advanced
alge132 Distance between two points in the plane: Exact answers
alge539 Table for a square root function
alge540 Domain of a square root function: Basic
pcalc763 Domain of a square root function: Advanced
alge543 Graphing a square root function: Problem type 1
alge544 Graphing a square root function: Problem type 2
alge812 Converting between radical form and exponent form

alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge561 Rational exponents: Unit fraction exponents and bases involving signs
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge558 Rational exponents: Product rule
 alge559 Rational exponents: Quotient rule
 alge773 Rational exponents: Products and quotients with negative exponents
 alge562 Rational exponents: Power of a power rule
 alge249 Rational exponents: Powers of powers with negative exponents
 alge563 Simplifying products or quotients of higher radicals with different indices: Univariate

Complex Numbers and Quadratic Equations

alge778 Using i to rewrite square roots of negative numbers
 alge779 Simplifying a product and quotient involving square roots of negative numbers
 pcalc048 Adding or subtracting complex numbers
 pcalc049 Multiplying complex numbers
 pcalc050 Dividing complex numbers
 pcalc053 Simplifying a power of i
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 pcalc051 Solving a quadratic equation with complex roots
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge974 Finding the vertex, x -intercepts, and axis of symmetry from the graph of a parabola
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge277 Finding the x -intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 pcalc762 Range of a quadratic function
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 alge723 How the leading coefficient affects the shape of a parabola
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun019 Sum, difference, and product of two functions
 fun022 Composition of two functions: Basic
 pcalc776 Expressing a function as a composition of two functions
 pcalc924 Determining whether an equation defines a function: Basic
 pcalc757 Determining whether an equation defines a function: Advanced

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Real Numbers

arith687 Fractional position on a number line
arith829 Reading decimal position on a number line: Tenths
arith830 Reading decimal position on a number line: Hundredths
alge286 Plotting integers on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
arith712 Ordering real numbers
arith071 Absolute value of a number
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith711 Division involving zero
alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
arith070 Least common multiple of 2 numbers
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
arith104 Operations with absolute value: Problem type 2
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
arith655 Introduction to properties of addition
alge187 Properties of addition
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
arith656 Introduction to properties of multiplication
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge293 Combining like terms in a quadratic expression
geom300 Perimeter of a square or a rectangle
geom078 Sides of polygons having the same perimeter
geom019 Area of a square or a rectangle

geom620 Area of a rectangle involving fractions
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom841 Volume of a sphere
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom842 Surface area of a sphere

Linear Equations and Inequalities

alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)/b = c/d$
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic

alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
mstat065 Converting between temperatures in Fahrenheit and Celsius
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
alge016 Translating a sentence into a one-step equation
alge841 Translating a sentence into a multi-step equation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge014 Solving a word problem with two unknowns using a linear equation
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge730 Writing a multi-step equation for a real-world situation
alge794 Solving a value mixture problem using a linear equation
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge823 Solving a one-step word problem using the formula $d = rt$
alge218 Solving a word problem involving rates and time conversion
alge796 Solving a distance, rate, time problem using a linear equation
geom217 Finding the side length of a rectangle given its perimeter or area
geom817 Finding a side length given the perimeter and side lengths with variables
geom143 Finding the perimeter or area of a rectangle given one of these values
geom838 Circumference ratios
geom530 Solving equations involving vertical angles
geom623 Finding angle measures of a triangle given angles with variables
geom502 Finding angle measures of a right or isosceles triangle given angles with variables
stat803 Finding the value for a new score that will yield a given mean
mstat049 Computing a percentage from a table of values
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
arith854 Computing a percent mixture
alge795 Solving a percent mixture problem using a linear equation
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
arith232 Finding simple interest without a calculator
alge015 Translating a sentence by using an inequality symbol
alge845 Translating a sentence into a one-step inequality
alge846 Translating a sentence into a multi-step inequality
alge748 Writing an inequality for a real-world situation
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge847 Writing a compound inequality given a graph on the number line
set001 Set builder notation
set004 Set builder and interval notation
set002 Union and intersection of finite sets
set005 Union and intersection of intervals
alge844 Identifying solutions to a two-step linear inequality in one variable

alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge747 Solving a compound linear inequality: Interval notation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Lines and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x- and y-intercepts
 alge881 Graphing a line by first finding its x- and y-intercepts
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax+By=C$
 alge882 Graphing a line by first finding its slope and y-intercept

alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge991 Solving a linear equation by graphing
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun030 Evaluating a piecewise-defined function
 fun033 Variable expressions as inputs of functions: Problem type 1
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems of Linear Equations

alge914 Identifying solutions to a system of linear equations

alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge077 Creating an inconsistent system of linear equations
 alge988 Identifying the operations used to create equivalent systems of equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc095 Linear programming
 pcalc094 Solving a word problem using linear programming
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc042 Finding the determinant of a 2x2 matrix
 pcalc043 Finding the determinant of a 3x3 matrix
 pcalc045 Using Cramer's rule to solve a 2x2 system of linear equations
 pcalc047 Using Cramer's rule to solve a 3x3 system of linear equations
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 pcalc046 Solving a system of linear equations given its augmented matrix

Exponents and Polynomials

alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents

alge790 Evaluating expressions with exponents of zero
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 pcalc117 Synthetic division
 pcalc786 Using the remainder theorem to evaluate a polynomial
 alge985 Closure properties of integers and polynomials

Factoring Polynomials

arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 alge605 Factoring a linear binomial
 alge736 Introduction to the GCF of two monomials
 alge930 Greatest common factor of three univariate monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate

alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge046 Roots of a product of polynomials
 alge163 Writing a quadratic equation given the roots and the leading coefficient
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 alge715 Domain of a rational function: Excluded values
 alge454 Simplifying a ratio of factored polynomials: Linear factors
 alge455 Simplifying a ratio of factored polynomials: Factors with exponents
 alge456 Simplifying a ratio of polynomials using GCF factoring
 alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
 alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge459 Simplifying a ratio of polynomials: Problem type 3
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge460 Multiplying rational expressions made up of linear expressions
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
 alge462 Multiplying rational expressions involving multivariate quadratics
 alge054 Dividing rational expressions involving multivariate monomials

alge463 Dividing rational expressions involving linear expressions
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
 alge465 Dividing rational expressions involving multivariate quadratics
 alge466 Multiplication and division of 3 rational expressions
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
 alge428 Finding the LCD of rational expressions with linear denominators: Common factors
 alge429 Finding the LCD of rational expressions with quadratic denominators
 alge430 Writing equivalent rational expressions with monomial denominators
 alge431 Writing equivalent rational expressions with polynomial denominators
 alge304 Writing equivalent rational expressions involving opposite factors
 alge432 Introduction to adding fractions with variables and common denominators
 alge433 Adding rational expressions with common denominators and monomial numerators
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge434 Adding rational expressions with common denominators and GCF factoring
 alge435 Adding rational expressions with common denominators and quadratic factoring
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge437 Adding rational expressions with denominators ax and bx : Basic
 alge438 Adding rational expressions with denominators ax and bx : Advanced
 alge439 Adding rational expressions with denominators axn and bxm
 alge440 Adding rational expressions with multivariate monomial denominators: Basic
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge441 Adding rational expressions with linear denominators without common factors: Basic
 alge442 Adding rational expressions with linear denominators without common factors: Advanced
 alge443 Adding rational expressions with linear denominators with common factors: Basic
 alge444 Adding rational expressions with linear denominators with common factors: Advanced
 alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
 alge661 Adding rational expressions involving different quadratic denominators
 alge446 Adding 3 rational expressions with different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge470 Complex fraction involving univariate monomials
 alge058 Complex fraction involving multivariate monomials
 alge471 Complex fraction: GCF factoring
 alge472 Complex fraction: Quadratic factoring
 alge473 Complex fraction made of sums involving rational expressions: Problem type 1
 alge474 Complex fraction made of sums involving rational expressions: Problem type 2
 alge475 Complex fraction made of sums involving rational expressions: Problem type 3
 alge476 Complex fraction made of sums involving rational expressions: Problem type 4
 alge477 Complex fraction made of sums involving rational expressions: Problem type 5
 alge478 Complex fraction made of sums involving rational expressions: Problem type 6
 alge479 Complex fraction made of sums involving rational expressions: Multivariate
 alge480 Complex fraction with negative exponents: Problem type 1
 alge481 Complex fraction with negative exponents: Problem type 2
 alge162 Complex fraction that contains a complex fraction
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
 alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
 alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1

alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
 alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom133 Ratio of volumes
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge450 Solving a distance, rate, time problem using a rational equation
 alge059 Ordering fractions with variables
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation
 pcalc917 Finding the asymptotes of a rational function: Constant over linear
 pcalc918 Finding the asymptotes of a rational function: Linear over linear
 alge515 Graphing a rational function: Constant over linear
 alge516 Graphing a rational function: Linear over linear

Radicals

alge413 Finding all square roots of a number
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith761 Square roots of integers raised to even exponents
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 alge537 Using absolute value to simplify square roots of perfect square monomials
 arith094 Cube root of an integer
 alge549 Finding n th roots of perfect n th powers with signs
 arith768 Finding the n th root of a perfect n th power fraction
 alge550 Finding the n th root of a perfect n th power monomial
 alge538 Using absolute value to simplify higher radical expressions
 alge539 Table for a square root function
 alge546 Evaluating a cube root function
 alge540 Domain of a square root function: Basic
 pcalc763 Domain of a square root function: Advanced
 alge547 Domains of higher root functions
 alge543 Graphing a square root function: Problem type 1
 alge544 Graphing a square root function: Problem type 2
 alge545 Graphing a square root function: Problem type 3
 alge548 Graphing a cube root function
 alge812 Converting between radical form and exponent form
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge561 Rational exponents: Unit fraction exponents and bases involving signs
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge558 Rational exponents: Product rule
 alge559 Rational exponents: Quotient rule
 alge773 Rational exponents: Products and quotients with negative exponents

alge562 Rational exponents: Power of a power rule
 alge249 Rational exponents: Powers of powers with negative exponents
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 alge520 Introduction to simplifying a radical expression with an odd exponent
 alge521 Simplifying a radical expression with an odd exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge551 Introduction to simplifying a higher radical expression
 alge552 Simplifying a higher radical expression: Univariate
 alge811 Simplifying a higher radical expression: Multivariate
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 alge533 Square root addition or subtraction with three terms
 alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
 alge532 Simplifying a sum or difference of radical expressions: Univariate
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 alge554 Simplifying a sum or difference of higher roots
 alge555 Simplifying a sum or difference of higher radical expressions
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith039 Square root multiplication: Advanced
 alge522 Introduction to simplifying a product of radical expressions: Univariate
 alge523 Simplifying a product of radical expressions: Univariate
 alge640 Simplifying a product of radical expressions: Multivariate
 alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
 alge556 Introduction to simplifying a product of higher roots
 alge557 Simplifying a product of higher radical expressions
 alge525 Introduction to simplifying a product involving square roots using the distributive property
 alge526 Simplifying a product involving square roots using the distributive property: Basic
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge984 Classifying sums and products as rational or irrational
 arith766 Simplifying a quotient of square roots
 alge530 Simplifying a quotient involving a sum or difference with a square root
 alge527 Rationalizing a denominator: Quotient involving square roots
 alge528 Rationalizing a denominator: Square root of a fraction
 alge529 Rationalizing a denominator: Quotient involving a monomial
 alge534 Rationalizing a denominator using conjugates: Integer numerator
 alge535 Rationalizing a denominator using conjugates: Square root in numerator
 alge536 Rationalizing a denominator using conjugates: Variable in denominator
 alge564 Rationalizing a denominator: Quotient involving a higher radical
 alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
 alge563 Simplifying products or quotients of higher radicals with different indices: Univariate
 alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
 alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
 alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
 alge411 Solving a radical equation with a quadratic expression under the radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced
 alge410 Solving an equation with a root index greater than 2: Problem type 1
 alge417 Solving an equation with a root index greater than 2: Problem type 2
 alge416 Solving an equation with exponent $1/a$: Problem type 1
 alge418 Solving an equation with exponent $1/a$: Problem type 2

alge778 Using i to rewrite square roots of negative numbers
 alge779 Simplifying a product and quotient involving square roots of negative numbers
 pcalc048 Adding or subtracting complex numbers
 pcalc049 Multiplying complex numbers
 pcalc050 Dividing complex numbers
 pcalc053 Simplifying a power of i

Quadratic Equations and Functions

alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 pcalc051 Solving a quadratic equation with complex roots
 alge214 Discriminant of a quadratic equation
 alge193 Discriminant of a quadratic equation with parameter
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge228 Solving an equation using the odd-root property: Problem type 2
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge782 Solving an equation that can be written in quadratic form: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 alge974 Finding the vertex, x -intercepts, and axis of symmetry from the graph of a parabola
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge277 Finding the x -intercept(s) and the vertex of a parabola
 pcalc793 Using a graphing calculator to find the x -intercept(s) and vertex of a quadratic function
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 pcalc762 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 alge723 How the leading coefficient affects the shape of a parabola
 alge784 Solving a quadratic inequality written in factored form
 alge771 Solving a quadratic inequality
 pcalc676 Solving a polynomial inequality
 alge783 Solving a rational inequality: Problem type 1
 pcalc677 Solving a rational inequality: Problem type 2

Function Operations and Inverses

alge953 Translating the graph of a parabola: One step
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge185 Writing an equation for a function after a vertical translation

fun020 Writing an equation for a function after a vertical and horizontal translation
 fun019 Sum, difference, and product of two functions
 alge786 Quotient of two functions: Basic
 pcalc756 Combining functions: Advanced
 fun022 Composition of two functions: Basic
 pcalc776 Expressing a function as a composition of two functions
 fun021 Composition of two functions: Domain and range
 alge129 Composition of two functions: Advanced
 pcalc924 Determining whether an equation defines a function: Basic
 pcalc757 Determining whether an equation defines a function: Advanced
 fun011 Horizontal line test
 pcalc777 Determining whether two functions are inverses of each other
 fun012 Inverse functions: Linear, discrete
 alge130 Inverse functions: Rational
 pcalc778 Inverse functions: Quadratic, cubic, radical

Exponential and Logarithmic Functions

alge971 Table for an exponential function
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 pcalc922 Translating the graph of an exponential function
 pcalc797 The graph, domain, and range of an exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^{x-b} + c$
 alge830 Evaluating an exponential function that models a real-world situation
 pcalc919 Evaluating an exponential function with base e that models a real-world situation
 arith853 Introduction to compound interest
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge993 Comparing linear, polynomial, and exponential functions
 alge108 Converting between logarithmic and exponential equations
 pcalc799 Converting between natural logarithmic and exponential equations
 alge232 Evaluating a logarithmic expression
 alge233 Solving an equation of the form $\log_b a = c$
 pcalc923 Translating the graph of a logarithmic function
 alge788 Graphing a logarithmic function: Basic
 pcalc800 The graph, domain, and range of a logarithmic function
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc708 Basic properties of logarithms
 pcalc779 Expanding a logarithmic expression: Problem type 1
 pcalc780 Expanding a logarithmic expression: Problem type 2
 alge787 Writing an expression as a single logarithm
 pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 pcalc803 Solving a multi-step equation involving a single logarithm
 pcalc804 Solving a multi-step equation involving natural logarithms
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge482 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic
 pcalc921 Solving an exponential equation by using natural logarithms: Decimal answers
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc614 Finding the initial or final amount in a word problem on exponential growth or decay

pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay

Conic Sections and Sequences

alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 alge132 Distance between two points in the plane: Exact answers
 pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc068 Writing an equation of a parabola given the vertex and the focus
 pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc605 Graphing a circle given its equation in standard form
 pcalc128 Graphing a circle given its equation in general form: Basic
 pcalc129 Graphing a circle given its equation in general form: Advanced
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 pcalc734 Graphing an ellipse given its equation in standard form
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$
 pcalc071 Graphing an ellipse given its equation in general form
 pcalc735 Graphing a hyperbola given its equation in standard form
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 pcalc076 Graphing a hyperbola given its equation in general form
 pcalc736 Classifying conics given their equations
 alge994 Graphically solving a system of linear and quadratic equations
 pcalc796 Using a graphing calculator to solve a system of equations
 alge995 Solving a system of linear and quadratic equations
 pcalc098 Solving a system of nonlinear equations: Problem type 1
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 pcalc096 Graphing a system of nonlinear inequalities: Problem type 1
 pcalc097 Graphing a system of nonlinear inequalities: Problem type 2
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc715 Finding a specified term of an arithmetic sequence given two terms of the sequence
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence
 pcalc718 Sum of the first n terms of an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc717 Finding a specified term of a geometric sequence given two terms of the sequence
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 pcalc719 Sum of the first n terms of a geometric sequence
 pcalc720 Sum of an infinite geometric series
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 pcalc082 Factorial expressions
 pcalc087 Binomial formula

B.53 College Preparedness

Whole Numbers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith001 Addition without carry
arith635 Adding a 2-digit number and a 1-digit number with carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith128 Adding or subtracting 10, 100, or 1000
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
arith655 Introduction to properties of addition
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith679 Multiplication by 10, 100, and 1000
arith003 Multiplication without carry
arith004 Multiplication with carry
arith632 Multiplication with trailing zeros: Problem type 1
arith615 Introduction to multiplication of large numbers
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith656 Introduction to properties of multiplication
arith075 Division facts
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith052 Division without carry
arith005 Division with carry
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith604 Estimating a product or quotient of whole numbers
arith692 Writing expressions using exponents

arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith657 Understanding the distributive property
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge009 Additive property of equality with whole numbers
alge008 Multiplicative property of equality with whole numbers
alge803 Using two steps to solve an equation with whole numbers
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith240 Word problem with common multiples
alge925 Finding the next terms of an arithmetic sequence with whole numbers
alge933 Finding the next terms of a geometric sequence with whole numbers
alge732 Finding patterns in shapes

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators

arith803 Addition and subtraction of 3 fractions with different denominators
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3

Decimals, Proportions, and Percents

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2

arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith224 Word problem with decimal addition and multiplication
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith227 Word problem with decimal subtraction and division
alge823 Solving a one-step word problem using the formula $d = rt$
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith733 Using a calculator to convert a fraction to a rounded decimal
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith732 Converting a fraction or mixed number to a rounded decimal
arith609 Ordering fractions and decimals
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith748 Addition or subtraction with a decimal and a mixed number
arith749 Multiplication with a decimal and a fraction
arith823 Writing ratios using different notations
arith663 Writing ratios for real-world situations
arith824 Simplifying a ratio of whole numbers: Problem type 1
arith825 Simplifying a ratio of decimals
arith827 Finding a unit price
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
arith828 Computing unit prices to find the better buy
alge272 Solving a proportion of the form $x/a = b/c$
arith064 Solving a word problem on proportions using a unit rate
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
alge063 Word problem on mixed number proportions
arith045 Word problem with powers of ten
arith836 Converting a fraction with a denominator of 100 to a percentage
arith837 Converting a percentage to a fraction with a denominator of 100
arith674 Finding the percentage of a grid that is shaded
arith723 Introduction to converting a percentage to a decimal
arith833 Introduction to converting a decimal to a percentage
arith834 Converting between percentages and decimals
arith841 Converting a mixed number percentage to a decimal
arith835 Converting between percentages and decimals in a real-world situation
arith090 Converting a percentage to a fraction in simplest form
arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage

arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 mstat049 Computing a percentage from a table of values
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest

Geometry, Measurement, Data Analysis

geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom358 Identifying parallel and perpendicular lines
 geom349 Naming segments, rays, and lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom305 Identifying supplementary and vertical angles
 geom304 Identifying corresponding and alternate angles
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom340 Area of a piecewise rectangular figure

geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom344 Area involving rectangles and triangles
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom347 Introduction to a circle: Diameter, radius, and chord
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom354 Volume of a rectangular prism made of unit cubes
geom311 Volume of a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom841 Volume of a sphere
geom219 Nets of solids
geom816 Side views of a solid made of cubes
geom031 Surface area of a cube or a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom621 Surface area of a cylinder
geom842 Surface area of a sphere
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge407 Introduction to the Pythagorean Theorem
geom044 Pythagorean Theorem
alge408 Word problem involving the Pythagorean Theorem
geom359 Identifying congruent shapes on a grid
geom520 Identifying and naming congruent triangles
geom360 Identifying similar or congruent shapes on a grid
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
mstat059 Choosing U.S. Customary measurement units
unit005 U.S. Customary unit conversion with whole number values
mstat035 Conversions involving measurements in feet and inches
mstat036 Adding measurements in feet and inches
unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
unit009 U.S. Customary area unit conversion with whole number values
mstat060 Choosing metric measurement units
unit001 Metric distance conversion with whole number values
unit002 Metric mass or capacity conversion with whole number values
unit003 Metric distance conversion with decimal values
unit004 Metric conversion with decimal values: Two-step problem
unit010 Metric area unit conversion with decimal values
unit012 Time unit conversion with whole number values
time006 Adding time
time007 Elapsed time
arith063 Word problem with clocks
mstat065 Converting between temperatures in Fahrenheit and Celsius

arith826 Simplifying a ratio of whole numbers: Problem type 2
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat056 Interpreting a tally table
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat007 Interpreting a line graph
 mstat031 Interpreting a stem-and-leaf plot
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 mstat025 Finding if a question can be answered by the data
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 arith103 Average of two numbers
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 stat009 Percentiles
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

Real Numbers

alge286 Plotting integers on a number line
 arith605 Plotting rational numbers on a number line

mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith755 Addition and subtraction with 4 or 5 integers
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith750 Signed decimal multiplication
 arith751 Signed decimal division
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 unit052 Finding the absolute error and percent error of a measurement
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge187 Properties of addition
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression

Linear Equations and Inequalities

alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals

alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge730 Writing a multi-step equation for a real-world situation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 arith854 Computing a percent mixture
 alge795 Solving a percent mixture problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set004 Set builder and interval notation
 set002 Union and intersection of finite sets
 set005 Union and intersection of intervals
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge747 Solving a compound linear inequality: Interval notation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Lines, Functions, Systems

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts

alge881 Graphing a line by first finding its x- and y-intercepts
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge991 Solving a linear equation by graphing
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 stat021 Population standard deviation
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun030 Evaluating a piecewise-defined function
 fun033 Variable expressions as inputs of functions: Problem type 1
 pcalc924 Determining whether an equation defines a function: Basic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun007 Domain and range from the graph of a discrete relation
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function

fun026 Finding an output of a function from its graph
pcalc761 Finding inputs and outputs of a function from its graph
pcalc750 Finding intercepts of a nonlinear function given its graph
alge999 Finding where a function is increasing, decreasing, or constant given the graph
pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
pcalc752 Finding local maxima and minima of a function given the graph
mstat018 Choosing a graph to fit a narrative: Basic
mstat051 Choosing a graph to fit a narrative: Advanced
alge896 Graphing an integer function and finding its range for a given domain
alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
alge955 Graphing a parabola of the form $y = ax^2 + c$
alge572 Graphing a function of the form $f(x) = ax^2$
alge573 Graphing a function of the form $f(x) = ax^2 + c$
alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
fun031 Graphing a piecewise-defined function: Problem type 1
alge997 Finding the average rate of change of a function given its equation
alge998 Finding the average rate of change of a function given its graph
alge914 Identifying solutions to a system of linear equations
alge075 Classifying systems of linear equations from graphs
alge725 Graphically solving a system of linear equations
alge751 Solving a system of linear equations using substitution
alge915 Solving a system of linear equations using elimination with addition
alge076 Solving a system of linear equations using elimination with multiplication and addition
alge916 Solving a system of linear equations with fractional coefficients
alge917 Solving a system of linear equations with decimal coefficients
alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
alge077 Creating an inconsistent system of linear equations
alge988 Identifying the operations used to create equivalent systems of equations
alge753 Solving a 3x3 system of linear equations: Problem type 1
alge263 Interpreting the graphs of two functions
alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
alge184 Solving a value mixture problem using a system of linear equations
alge192 Solving a percent mixture problem using a system of linear equations
alge224 Solving a distance, rate, time problem using a system of linear equations
alge172 Solving a tax rate or interest rate problem using a system of linear equations
alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
alge912 Identifying solutions to a linear inequality in two variables
alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
alge720 Graphing a linear inequality in the plane: Slope-intercept form
alge018 Graphing a linear inequality in the plane: Standard form
alge079 Graphing a system of two linear inequalities: Basic
alge921 Graphing a system of two linear inequalities: Advanced
alge922 Graphing a system of three linear inequalities
alge729 Writing a multi-step inequality for a real-world situation
pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
pcalc095 Linear programming
pcalc094 Solving a word problem using linear programming
pcalc037 Scalar multiplication of a matrix
pcalc038 Addition or subtraction of matrices
pcalc740 Linear combination of matrices
pcalc042 Finding the determinant of a 2x2 matrix
pcalc043 Finding the determinant of a 3x3 matrix
pcalc045 Using Cramer's rule to solve a 2x2 system of linear equations
pcalc047 Using Cramer's rule to solve a 3x3 system of linear equations
pcalc712 Gauss-Jordan elimination with a 2x2 matrix
pcalc046 Solving a system of linear equations given its augmented matrix

Exponents and Polynomials

alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate

alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 pcalc117 Synthetic division
 pcalc786 Using the remainder theorem to evaluate a polynomial
 alge985 Closure properties of integers and polynomials
 alge605 Factoring a linear binomial
 alge736 Introduction to the GCF of two monomials
 alge930 Greatest common factor of three univariate monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
 alge046 Roots of a product of polynomials
 alge163 Writing a quadratic equation given the roots and the leading coefficient

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 alge715 Domain of a rational function: Excluded values
 alge454 Simplifying a ratio of factored polynomials: Linear factors
 alge455 Simplifying a ratio of factored polynomials: Factors with exponents
 alge456 Simplifying a ratio of polynomials using GCF factoring
 alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
 alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
 alge710 Simplifying a ratio of polynomials: Problem type 1

alge682 Simplifying a ratio of polynomials: Problem type 2
 alge459 Simplifying a ratio of polynomials: Problem type 3
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge460 Multiplying rational expressions made up of linear expressions
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
 alge462 Multiplying rational expressions involving multivariate quadratics
 alge054 Dividing rational expressions involving multivariate monomials
 alge463 Dividing rational expressions involving linear expressions
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
 alge465 Dividing rational expressions involving multivariate quadratics
 alge466 Multiplication and division of 3 rational expressions
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
 alge428 Finding the LCD of rational expressions with linear denominators: Common factors
 alge429 Finding the LCD of rational expressions with quadratic denominators
 alge430 Writing equivalent rational expressions with monomial denominators
 alge431 Writing equivalent rational expressions with polynomial denominators
 alge304 Writing equivalent rational expressions involving opposite factors
 alge432 Introduction to adding fractions with variables and common denominators
 alge433 Adding rational expressions with common denominators and monomial numerators
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge434 Adding rational expressions with common denominators and GCF factoring
 alge435 Adding rational expressions with common denominators and quadratic factoring
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge437 Adding rational expressions with denominators ax and bx : Basic
 alge438 Adding rational expressions with denominators ax and bx : Advanced
 alge439 Adding rational expressions with denominators axn and bxm
 alge440 Adding rational expressions with multivariate monomial denominators: Basic
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge441 Adding rational expressions with linear denominators without common factors: Basic
 alge442 Adding rational expressions with linear denominators without common factors: Advanced
 alge443 Adding rational expressions with linear denominators with common factors: Basic
 alge444 Adding rational expressions with linear denominators with common factors: Advanced
 alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
 alge661 Adding rational expressions involving different quadratic denominators
 alge446 Adding 3 rational expressions with different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge470 Complex fraction involving univariate monomials
 alge058 Complex fraction involving multivariate monomials
 alge471 Complex fraction: GCF factoring
 alge472 Complex fraction: Quadratic factoring
 alge473 Complex fraction made of sums involving rational expressions: Problem type 1
 alge474 Complex fraction made of sums involving rational expressions: Problem type 2
 alge475 Complex fraction made of sums involving rational expressions: Problem type 3
 alge476 Complex fraction made of sums involving rational expressions: Problem type 4
 alge477 Complex fraction made of sums involving rational expressions: Problem type 5
 alge478 Complex fraction made of sums involving rational expressions: Problem type 6
 alge479 Complex fraction made of sums involving rational expressions: Multivariate
 alge480 Complex fraction with negative exponents: Problem type 1
 alge481 Complex fraction with negative exponents: Problem type 2
 alge162 Complex fraction that contains a complex fraction
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
 alge422 Solving a rational equation that simplifies to linear: Like binomial denominators

alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
 alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
 alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
 alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge450 Solving a distance, rate, time problem using a rational equation
 geom133 Ratio of volumes
 alge059 Ordering fractions with variables
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation
 pcalc917 Finding the asymptotes of a rational function: Constant over linear
 pcalc918 Finding the asymptotes of a rational function: Linear over linear
 alge515 Graphing a rational function: Constant over linear
 alge516 Graphing a rational function: Linear over linear

Radicals

alge413 Finding all square roots of a number
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith761 Square roots of integers raised to even exponents
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 alge537 Using absolute value to simplify square roots of perfect square monomials
 arith094 Cube root of an integer
 alge549 Finding n th roots of perfect n th powers with signs
 arith768 Finding the n th root of a perfect n th power fraction
 alge550 Finding the n th root of a perfect n th power monomial
 alge538 Using absolute value to simplify higher radical expressions
 alge539 Table for a square root function
 alge546 Evaluating a cube root function
 alge540 Domain of a square root function: Basic
 pcalc763 Domain of a square root function: Advanced
 alge547 Domains of higher root functions
 alge543 Graphing a square root function: Problem type 1
 alge544 Graphing a square root function: Problem type 2
 alge545 Graphing a square root function: Problem type 3
 alge548 Graphing a cube root function
 alge812 Converting between radical form and exponent form
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge561 Rational exponents: Unit fraction exponents and bases involving signs
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base

alge251 Rational exponents: Negative exponents and fractional bases
 alge558 Rational exponents: Product rule
 alge559 Rational exponents: Quotient rule
 alge773 Rational exponents: Products and quotients with negative exponents
 alge562 Rational exponents: Power of a power rule
 alge249 Rational exponents: Powers of powers with negative exponents
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 alge520 Introduction to simplifying a radical expression with an odd exponent
 alge521 Simplifying a radical expression with an odd exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge551 Introduction to simplifying a higher radical expression
 alge552 Simplifying a higher radical expression: Univariate
 alge811 Simplifying a higher radical expression: Multivariate
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 alge533 Square root addition or subtraction with three terms
 alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
 alge532 Simplifying a sum or difference of radical expressions: Univariate
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 alge554 Simplifying a sum or difference of higher roots
 alge555 Simplifying a sum or difference of higher radical expressions
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith039 Square root multiplication: Advanced
 alge522 Introduction to simplifying a product of radical expressions: Univariate
 alge523 Simplifying a product of radical expressions: Univariate
 alge640 Simplifying a product of radical expressions: Multivariate
 alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
 alge556 Introduction to simplifying a product of higher roots
 alge557 Simplifying a product of higher radical expressions
 alge525 Introduction to simplifying a product involving square roots using the distributive property
 alge526 Simplifying a product involving square roots using the distributive property: Basic
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge984 Classifying sums and products as rational or irrational
 arith766 Simplifying a quotient of square roots
 alge530 Simplifying a quotient involving a sum or difference with a square root
 alge527 Rationalizing a denominator: Quotient involving square roots
 alge528 Rationalizing a denominator: Square root of a fraction
 alge529 Rationalizing a denominator: Quotient involving a monomial
 alge534 Rationalizing a denominator using conjugates: Integer numerator
 alge535 Rationalizing a denominator using conjugates: Square root in numerator
 alge536 Rationalizing a denominator using conjugates: Variable in denominator
 alge564 Rationalizing a denominator: Quotient involving a higher radical
 alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
 alge563 Simplifying products or quotients of higher radicals with different indices: Univariate
 alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
 alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
 alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
 alge411 Solving a radical equation with a quadratic expression under the radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced

alge410 Solving an equation with a root index greater than 2: Problem type 1
 alge417 Solving an equation with a root index greater than 2: Problem type 2
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge228 Solving an equation using the odd-root property: Problem type 2
 alge416 Solving an equation with exponent $1/a$: Problem type 1
 alge418 Solving an equation with exponent $1/a$: Problem type 2
 alge778 Using i to rewrite square roots of negative numbers
 alge779 Simplifying a product and quotient involving square roots of negative numbers
 pcalc048 Adding or subtracting complex numbers
 pcalc049 Multiplying complex numbers
 pcalc050 Dividing complex numbers
 pcalc053 Simplifying a power of i

Quadratic Equations and Functions

alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 pcalc051 Solving a quadratic equation with complex roots
 alge214 Discriminant of a quadratic equation
 alge193 Discriminant of a quadratic equation with parameter
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge782 Solving an equation that can be written in quadratic form: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge974 Finding the vertex, x -intercepts, and axis of symmetry from the graph of a parabola
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge277 Finding the x -intercept(s) and the vertex of a parabola
 pcalc793 Using a graphing calculator to find the x -intercept(s) and vertex of a quadratic function
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 pcalc762 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 alge723 How the leading coefficient affects the shape of a parabola
 alge784 Solving a quadratic inequality written in factored form
 alge771 Solving a quadratic inequality
 pcalc676 Solving a polynomial inequality
 alge783 Solving a rational inequality: Problem type 1
 pcalc677 Solving a rational inequality: Problem type 2
 alge953 Translating the graph of a parabola: One step
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation

fun019 Sum, difference, and product of two functions
 alge786 Quotient of two functions: Basic
 pcalc756 Combining functions: Advanced
 fun022 Composition of two functions: Basic
 pcalc776 Expressing a function as a composition of two functions
 fun021 Composition of two functions: Domain and range
 alge129 Composition of two functions: Advanced
 pcalc757 Determining whether an equation defines a function: Advanced
 fun011 Horizontal line test
 pcalc777 Determining whether two functions are inverses of each other
 fun012 Inverse functions: Linear, discrete
 alge130 Inverse functions: Rational
 pcalc778 Inverse functions: Quadratic, cubic, radical

Logarithms, Conic Sections, Sequences

alge971 Table for an exponential function
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 pcalc922 Translating the graph of an exponential function
 pcalc797 The graph, domain, and range of an exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^{x-b} + c$
 alge830 Evaluating an exponential function that models a real-world situation
 pcalc919 Evaluating an exponential function with base e that models a real-world situation
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge993 Comparing linear, polynomial, and exponential functions
 alge108 Converting between logarithmic and exponential equations
 pcalc799 Converting between natural logarithmic and exponential equations
 alge232 Evaluating a logarithmic expression
 alge233 Solving an equation of the form $\log_b a = c$
 pcalc923 Translating the graph of a logarithmic function
 alge788 Graphing a logarithmic function: Basic
 pcalc800 The graph, domain, and range of a logarithmic function
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc708 Basic properties of logarithms
 pcalc779 Expanding a logarithmic expression: Problem type 1
 pcalc780 Expanding a logarithmic expression: Problem type 2
 alge787 Writing an expression as a single logarithm
 pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 pcalc803 Solving a multi-step equation involving a single logarithm
 pcalc804 Solving a multi-step equation involving natural logarithms
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge482 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic
 pcalc921 Solving an exponential equation by using natural logarithms: Decimal answers
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc614 Finding the initial or final amount in a word problem on exponential growth or decay
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay
 pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 pcalc068 Writing an equation of a parabola given the vertex and the focus

pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 alge132 Distance between two points in the plane: Exact answers
 pcalc605 Graphing a circle given its equation in standard form
 pcalc128 Graphing a circle given its equation in general form: Basic
 pcalc129 Graphing a circle given its equation in general form: Advanced
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 pcalc734 Graphing an ellipse given its equation in standard form
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$
 pcalc071 Graphing an ellipse given its equation in general form
 pcalc735 Graphing a hyperbola given its equation in standard form
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 pcalc076 Graphing a hyperbola given its equation in general form
 pcalc736 Classifying conics given their equations
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 pcalc796 Using a graphing calculator to solve a system of equations
 pcalc098 Solving a system of nonlinear equations: Problem type 1
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 pcalc096 Graphing a system of nonlinear inequalities: Problem type 1
 pcalc097 Graphing a system of nonlinear inequalities: Problem type 2
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc715 Finding a specified term of an arithmetic sequence given two terms of the sequence
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence
 pcalc718 Sum of the first n terms of an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc717 Finding a specified term of a geometric sequence given two terms of the sequence
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 pcalc719 Sum of the first n terms of a geometric sequence
 pcalc720 Sum of an infinite geometric series
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 pcalc087 Binomial formula

B.54 Math Prep. for the CAHSEE

Whole Numbers

arith001 Addition without carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith007 Subtraction without borrowing

arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith008 One-digit multiplication
arith003 Multiplication without carry
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith014 Multiplication of large numbers
arith075 Division facts
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith052 Division without carry
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith023 Word problem with division of whole numbers and rounding
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith604 Estimating a product or quotient of whole numbers
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith409 Introduction to the distributive property
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge008 Multiplicative property of equality with whole numbers
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom359 Identifying congruent shapes on a grid

Fractions

arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith821 Exponents and fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions

Decimals

arith110 Decimal place value: Tenths and hundredths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith221 Rounding decimals
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith082 Multiplication of a decimal by a power of ten

arith738 Multiplication of a decimal by a power of 0.1
 arith135 Word problem with multiplication of a decimal and a whole number
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith083 Division of a decimal by a power of ten
 arith136 Word problem with division of a decimal and a whole number
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith103 Average of two numbers
 arith131 Estimating a decimal sum or difference
 arith752 Estimating a product of decimals
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith609 Ordering fractions and decimals
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals

Ratios, Proportions, and Percents

arith663 Writing ratios for real-world situations
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat065 Converting between temperatures in Fahrenheit and Celsius

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith686 Writing a ratio as a percentage
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest

Real Numbers

alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith402 Plotting opposite integers on a number line
 arith403 Finding opposites of integers
 arith605 Plotting rational numbers on a number line
 arith071 Absolute value of a number
 arith412 Finding all numbers with a given absolute value
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith116 Signed fraction addition or subtraction: Basic
 arith117 Signed decimal addition and subtraction
 arith822 Signed fraction multiplication: Basic
 arith814 Signed fraction division
 arith440 Operations with absolute value: Problem type 1
 alge694 Computing the distance between two integers on a number line
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction

alge004 Evaluating a quadratic expression: Integers
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions

Equations and Inequalities

alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge658 Introduction to solving a rational equation
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation

arith504 Writing an equation to represent a proportional relationship
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge794 Solving a value mixture problem using a linear equation
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 arith612 Word problem involving multiple rates
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3

Graphing

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced

alge197 Graphing a line given its x- and y-intercepts
 geom358 Identifying parallel and perpendicular lines
 mstat007 Interpreting a line graph
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge814 Using right triangles to find the slope of a line
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat018 Choosing a graph to fit a narrative: Basic
 set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 alge954 Graphing a parabola of the form $y = ax^2$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge702 Classifying the graph of a function
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge079 Graphing a system of two linear inequalities: Basic

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents

alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge689 Introduction to the quotient rule with negative exponents: Whole number base
 alge755 Quotient rule with negative exponents: Problem type 1
 alge691 Introduction to the power of a power rule with negative exponents: Whole number base
 alge025 Power of a power rule with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge764 Multiplying conjugate binomials: Univariate
 alge032 Squaring a binomial: Univariate
 alge935 Multiplication involving binomials and trinomials in one variable
 alge053 Multiplying rational expressions involving multivariate monomials
 alge054 Dividing rational expressions involving multivariate monomials
 alge759 Dividing a polynomial by a monomial: Univariate
 arith016 Square root of a perfect square
 arith763 Using a calculator to approximate a square root
 arith601 Square root of a rational perfect square
 arith602 Estimating a square root
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic

Geometry

geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom350 Distinguishing between the area and perimeter of a rectangle
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle

geom143 Finding the perimeter or area of a rectangle given one of these values
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom344 Area involving rectangles and triangles
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom536 Drawing and identifying a polygon in the coordinate plane
geom537 Finding the perimeter or area of a rectangle in the coordinate plane
alge407 Introduction to the Pythagorean Theorem
geom044 Pythagorean Theorem
alge408 Word problem involving the Pythagorean Theorem
geom068 Computing an area using the Pythagorean Theorem
geom603 Identifying side lengths that give right triangles
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom805 Arc length and area of a sector of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom311 Volume of a rectangular prism
geom354 Volume of a rectangular prism made of unit cubes
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom133 Ratio of volumes
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom555 Distinguishing between surface area and volume
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom578 Word problem involving the surface area of a cylinder
geom338 Surface area involving prisms or cylinders
geom360 Identifying similar or congruent shapes on a grid
geom037 Similar polygons
geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
geom847 Similar solids: Problem type 2
geom519 Identifying and naming congruent parts of congruent triangles
geom596 Translating a point and giving its coordinates: One step
geom598 Determining if figures are related by a translation
geom909 Translating a point and giving its coordinates: Two steps
geom330 Translating a polygon
geom331 Using a translated point to find coordinates of other translated points
arith408 Reflecting a point across an axis
geom590 Reflecting a point across an axis and giving its coordinates
geom592 Determining if figures are related by a reflection
arith407 Finding the coordinates of a point reflected across an axis

geom534 Reflecting a polygon across the x-axis or y-axis
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry

Data Analysis and Probability

mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat097 Constructing a two-way frequency table: Basic
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 arith856 Finding a percentage of a total amount in a circle graph
 arith916 Computing percentages for categories of a budget
 stat801 Computations from a circle graph
 stat804 Interpreting a circle graph or pie chart
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat003 Mode of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat802 Rejecting unreasonable claims based on average statistics
 stat805 Making a reasonable inference based on proportion statistics
 mstat025 Finding if a question can be answered by the data
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat012 Probability of independent events
 mstat013 Probability of dependent events

B.55 Prep. for FL Algebra 1 EOC Assessment

Arithmetic Readiness

arith123 Rounding to hundreds or thousands
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 alge731 Evaluating an algebraic expression: Whole numbers with two operations

arith658 Filling in missing operations to make an equation
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith226 Converting between percentages and decimals
arith090 Converting a percentage to a fraction in simplest form
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith069 Writing a ratio as a percentage without a calculator
mstat049 Computing a percentage from a table of values
arith030 Finding a percentage of a whole number without a calculator: Basic
arith698 Applying the percent equation
arith074 Finding the sale price without a calculator given the original price and percent discount
arith031 Finding the original price given the sale price and percent discount
arith225 Finding the percentage increase or decrease: Advanced
arith232 Finding simple interest without a calculator
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom221 Finding the missing length in a figure
geom019 Area of a square or a rectangle
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle

geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom031 Surface area of a cube or a rectangular prism
geom091 Surface area of a triangular prism
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom842 Surface area of a sphere
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere
geom039 Finding supplementary and complementary angles
mstat034 Measuring length to the nearest quarter or half inch
mstat035 Conversions involving measurements in feet and inches
mstat036 Adding measurements in feet and inches
unit005 U.S. Customary unit conversion with whole number values
unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
unit009 U.S. Customary area unit conversion with whole number values
unit001 Metric distance conversion with whole number values
unit002 Metric mass or capacity conversion with whole number values
unit003 Metric distance conversion with decimal values
unit004 Metric conversion with decimal values: Two-step problem
unit010 Metric area unit conversion with decimal values
unit034 Converting between metric and U.S. Customary unit systems
unit035 Converting between compound units: Basic
unit036 Converting between compound units: Advanced
mstat065 Converting between temperatures in Fahrenheit and Celsius

Real Numbers

alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
mstat038 Reading the temperature from a thermometer
arith699 Writing a signed number for a real-world situation
alge286 Plotting integers on a number line
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith116 Signed fraction addition or subtraction: Basic
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith822 Signed fraction multiplication: Basic
arith702 Exponents and integers: Problem type 1

arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations and Inequalities

alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge740 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge602 Writing a one-step variable expression for a real-world situation
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge794 Solving a value mixture problem using a linear equation

alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 alge015 Translating a sentence by using an inequality symbol
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge207 Solving a linear inequality: Problem type 4
 alge745 Solving a linear inequality: Problem type 5
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge748 Writing an inequality for a real-world situation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge270 Solving an absolute value equation of the form $a - x = b$ or $-x + a = b$
 alge103 Solving an absolute value equation of the form $-ax + b = c$
 alge170 Solving an absolute value inequality: Basic

Functions and Lines

set004 Set builder and interval notation
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun002 Graphing integer functions
 fun016 Domain and range from ordered pairs
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 pcalc114 Even and odd functions: Problem type 1
 pcalc768 Finding the average rate of change of a function
 fun019 Sum, difference, and product of two functions
 fun022 Composition of two functions: Basic
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x - and y -intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form

alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form

Systems

alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge079 Graphing a system of two linear inequalities: Basic
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1

alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 arith029 Ordering numbers with positive exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 alge807 Finding the next terms of a sequence with whole numbers
 alge732 Finding patterns in shapes
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge764 Multiplying conjugate binomials: Univariate
 alge765 Multiplying binomials in two variables
 alge032 Squaring a binomial: Univariate
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge040 Factoring a quadratic with leading coefficient greater than 1
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge043 Factoring a perfect square trinomial
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge624 Factoring a difference of squares
 alge038 Factoring a polynomial by grouping: Problem type 1
 alge181 Factoring a polynomial by grouping: Problem type 2

Rational and Radical Expressions

alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2

alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge272 Solving a proportion of the form $x/a = b/c$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 arith663 Writing ratios for real-world situations
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation
 alge772 Word problem on combined variation
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear
 alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 geom044 Pythagorean Theorem

Quadratic Functions and Equations

alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge252 Graphing a parabola of the form $y = ax^2$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 alge702 Classifying the graph of a function
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge681 Solving an equation written in factored form
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge524 Solving a word problem using a quadratic equation with irrational roots

Data Analysis and Probability

mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 mstat006 Constructing a box-and-whisker plot
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 geom814 Angle measure in a circle graph
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 mstat066 Weighted mean
 mstat025 Finding if a question can be answered by the data
 stat802 Rejecting unreasonable claims based on average statistics
 stat805 Making a reasonable inference based on proportion statistics
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle

mstat015 Counting principle
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

Perimeter, Area, and Volume

geom353 Perimeter of a piecewise rectangular figure
 geom078 Sides of polygons having the same perimeter
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alge724 Finding an area in terms of variables
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom805 Arc length and area of a sector of a circle
 geom830 Counting the cubes in a solid made of cubes
 geom354 Volume of a rectangular prism made of unit cubes
 geom505 Volume of a piecewise rectangular prism
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom348 Vertices, edges, and faces of a solid
 geom816 Side views of a solid made of cubes
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom338 Surface area involving prisms or cylinders

Lines, Angles, and Triangles

glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic008 Conditional statements and deductive reasoning
 geom349 Naming segments, rays, and lines
 geom526 Midpoint of a number line segment
 geom521 Segment addition and midpoints
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom358 Identifying parallel and perpendicular lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 geom154 Constructing the perpendicular bisector of a line segment
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom304 Identifying corresponding and alternate angles

geom305 Identifying supplementary and vertical angles
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom611 Proofs involving angle congruence
 geom159 Constructing congruent angles
 geom158 Constructing an angle bisector
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom845 Using triangle inequality to determine possible lengths of a third side
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom068 Computing an area using the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom506 Special right triangles: Exact answers
 geom212 Circles inscribed in and circumscribed about regular polygons
 geom520 Identifying and naming congruent triangles
 geom617 Proofs involving congruent triangles and vertical angles or the reflexive property
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom650 Indirect proof (proof by contradiction)
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc033 Solving a triangle with the law of cosines
 pcalc060 Magnitude of a vector given in component form
 pcalc063 Translation of a vector
 geom858 Scalar multiplication of a vector: Geometric Approach
 geom857 Vector addition: Geometric approach
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph

Polygons, Circles, and Similarity

alge191 Midpoint of a line segment in the plane
 alge132 Distance between two points in the plane: Exact answers
 geom310 Properties of quadrilaterals
 geom523 Conditions for quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom834 Finding measures involving diagonals of rhombi
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon
 geom853 Interior and exterior angle measures in a regular polygon
 geom819 Finding coordinates of vertices of polygons

geom818 Finding the coordinates of a point to make a parallelogram
 geom863 Congruence in the coordinate plane
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom511 Lengths of chords, secants, and tangents
 geom514 Inscribed angles of a circle
 geom512 Central angles and inscribed angles of a circle
 geom513 Angles of intersecting secants and tangents
 pcalc605 Graphing a circle given its equation in standard form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom510 Triangles and parallel lines
 geom507 Right triangles and geometric mean
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2
 geom357 Identifying transformations
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom335 Rotating a figure about the origin
 geom815 Finding an angle of rotation
 geom831 Rotational and point symmetries
 geom336 Dilating a figure

B.56 Prep. for FL Geometry EOC Assessment

Arithmetic Readiness

arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith801 Finding the LCD of two fractions
 arith230 Addition or subtraction of fractions with different denominators
 arith086 Product of a fraction and a whole number: Problem type 1
 arith053 Fraction multiplication
 arith088 The reciprocal of a number
 arith022 Fraction division
 arith015 Writing an improper fraction as a mixed number
 arith110 Decimal place value: Tenths and hundredths
 arith221 Rounding decimals
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 mstat034 Measuring length to the nearest quarter or half inch
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values

unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith118 Order of operations with integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced
 alge086 Rationalizing the denominator of a radical expression

Equations and Inequalities

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression
 alge187 Properties of addition
 alge188 Properties of real numbers
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge740 Multiplicative property of equality with integers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge272 Solving a proportion of the form $x/a = b/c$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 arith663 Writing ratios for real-world situations
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge746 Solving a compound linear inequality: Graph solution, basic

Linear Equations in Two Variables

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x - and y -intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge069 Finding the y -intercept of a line given its equation
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y -intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge752 Solving a 2×2 system of linear equations that is inconsistent or consistent dependent

Reasoning, Lines, and Angles

alge807 Finding the next terms of a sequence with whole numbers
 alge732 Finding patterns in shapes
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic008 Conditional statements and deductive reasoning
 geom349 Naming segments, rays, and lines
 geom525 Computing distances between decimals on the number line
 geom526 Midpoint of a number line segment
 geom521 Segment addition and midpoints
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 geom358 Identifying parallel and perpendicular lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 geom154 Constructing the perpendicular bisector of a line segment
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom304 Identifying corresponding and alternate angles
 geom305 Identifying supplementary and vertical angles
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom611 Proofs involving angle congruence
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles

Triangles

geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom801 Area of a triangle
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom845 Using triangle inequality to determine possible lengths of a third side
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom650 Indirect proof (proof by contradiction)
 geom359 Identifying congruent shapes on a grid
 geom520 Identifying and naming congruent triangles
 geom617 Proofs involving congruent triangles and vertical angles or the reflexive property
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom044 Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem

geom862 Using the Pythagorean Theorem repeatedly
 geom506 Special right triangles: Exact answers
 geom212 Circles inscribed in and circumscribed about regular polygons

Polygons

geom310 Properties of quadrilaterals
 geom523 Conditions for quadrilaterals
 geom532 Classifying parallelograms
 geom819 Finding coordinates of vertices of polygons
 geom818 Finding the coordinates of a point to make a parallelogram
 geom863 Congruence in the coordinate plane
 geom870 Sum of the angle measures of a quadrilateral
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom834 Finding measures involving diagonals of rhombi
 geom852 The sum of interior angle measures in a convex polygon
 geom853 Interior and exterior angle measures in a regular polygon
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alge724 Finding an area in terms of variables

Similarity, Trigonometry, and Transformations

geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom507 Right triangles and geometric mean
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc033 Solving a triangle with the law of cosines
 geom357 Identifying transformations
 geom330 Translating a polygon

geom331 Using a translated point to find coordinates of other translated points
geom332 Reflecting a polygon over a vertical or horizontal line
geom333 Finding the coordinates of three points reflected over an axis
geom334 Drawing lines of symmetry
geom335 Rotating a figure about the origin
geom815 Finding an angle of rotation
geom831 Rotational and point symmetries
geom336 Dilating a figure
pcalc060 Magnitude of a vector given in component form
pcalc063 Translation of a vector
geom858 Scalar multiplication of a vector: Geometric Approach
geom857 Vector addition: Geometric approach
geom856 Vector addition and scalar multiplication: Component form
vector008 Linear combination of vectors: Component form
vector002 Finding the magnitude and direction of a vector given its graph
vector005 Finding the components of a vector given its graph

Circles

geom347 Introduction to a circle: Diameter, radius, and chord
geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
geom848 Tangents of a circle: Problem type 1
geom849 Tangents of a circle: Problem type 2
geom511 Lengths of chords, secants, and tangents
geom514 Inscribed angles of a circle
geom512 Central angles and inscribed angles of a circle
geom513 Angles of intersecting secants and tangents
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios
geom802 Circumference and area of a circle
geom805 Arc length and area of a sector of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
pcalc605 Graphing a circle given its equation in standard form
pcalc065 Writing an equation of a circle given its center and a point on the circle
pcalc066 Writing an equation of a circle given the endpoints of a diameter

Volumes and Surface Areas

geom830 Counting the cubes in a solid made of cubes
geom354 Volume of a rectangular prism made of unit cubes
geom311 Volume of a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere
geom348 Vertices, edges, and faces of a solid
geom219 Nets of solids
geom861 Nets of solids: Advanced
geom816 Side views of a solid made of cubes
geom031 Surface area of a cube or a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes

geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom338 Surface area involving prisms or cylinders
 geom842 Surface area of a sphere
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Statistics and Probability

mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 mstat006 Constructing a box-and-whisker plot
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 geom814 Angle measure in a circle graph
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 mstat066 Weighted mean
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

Removed Topics - Arithmetic, Equations, Inequalities

arith056 Factors
 arith033 Greatest common factor of 2 numbers
 arith123 Rounding to hundreds or thousands
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 arith658 Filling in missing operations to make an equation
 arith034 Prime numbers
 arith035 Prime factorization

arith064 Solving a word problem on proportions using a unit rate
arith657 Understanding the distributive property
arith070 Least common multiple of 2 numbers
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith664 Introduction to addition or subtraction of fractions with different denominators
arith079 Product of a unit fraction and a whole number
arith119 Introduction to fraction multiplication
arith694 Division involving a whole number and a fraction
arith697 Mixed arithmetic operations with fractions
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith220 Decimal place value: Hundreds to ten thousandths
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith013 Decimal addition with 3 numbers
arith625 Subtraction of aligned decimals
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith226 Converting between percentages and decimals
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith090 Converting a percentage to a fraction in simplest form
mstat049 Computing a percentage from a table of values
arith232 Finding simple interest without a calculator
arith699 Writing a signed number for a real-world situation
mstat038 Reading the temperature from a thermometer
alge286 Plotting integers on a number line
arith691 Ordering integers
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
alge009 Additive property of equality with whole numbers
alge800 Additive property of equality with decimals
alge008 Multiplicative property of equality with whole numbers
alge825 Multiplicative property of equality with decimals
alge803 Using two steps to solve an equation with whole numbers
alge824 Solving a two-step equation with signed decimals
alge200 Solving an equation to find the value of an expression
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge733 Writing a one-step expression for a real-world situation
alge602 Writing a one-step variable expression for a real-world situation
alge730 Writing a multi-step equation for a real-world situation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge014 Solving a word problem with two unknowns using a linear equation
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$

alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge186 Translating a sentence into a compound inequality
 alge207 Solving a linear inequality: Problem type 4
 alge745 Solving a linear inequality: Problem type 5
 alge748 Writing an inequality for a real-world situation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge270 Solving an absolute value equation of the form $a - x = b$ or $-x + a = b$
 alge103 Solving an absolute value equation of the form $-ax + b = c$
 alge170 Solving an absolute value inequality: Basic
 mstat025 Finding if a question can be answered by the data
 stat802 Rejecting unreasonable claims based on average statistics
 stat805 Making a reasonable inference based on proportion statistics
 stat021 Population standard deviation

Removed Topics - Advanced Algebra

set004 Set builder and interval notation
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 pcalc768 Finding the average rate of change of a function
 fun019 Sum, difference, and product of two functions
 fun022 Composition of two functions: Basic
 fun002 Graphing integer functions
 pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 pcalc114 Even and odd functions: Problem type 1
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge753 Solving a 3×3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations

alge172 Solving a tax rate or interest rate problem using a system of linear equations
alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
alge018 Graphing a linear inequality in the plane: Standard form
alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
alge720 Graphing a linear inequality in the plane: Slope-intercept form
alge079 Graphing a system of two linear inequalities: Basic
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
scinot002 Multiplying and dividing numbers written in scientific notation
alge790 Evaluating expressions with exponents of zero
arith684 Power of 10: Negative exponent
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
alge791 Rewriting an algebraic expression without a negative exponent
alge821 Understanding the product rule of exponents
alge024 Introduction to the product rule of exponents
alge030 Product rule with positive exponents: Multivariate
alge028 Product rule with negative exponents
alge827 Introduction to the quotient rule of exponents
alge026 Quotient of expressions involving exponents
alge755 Quotient rule with negative exponents: Problem type 1
alge826 Understanding the power rules of exponents
alge754 Introduction to the power rules of exponents
alge027 Power rules with positive exponents
alge025 Power of a power rule with negative exponents
alge799 Power rules with negative exponents
alge756 Power and product rules with positive exponents
arith029 Ordering numbers with positive exponents
alge758 Degree and leading coefficient of a univariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge764 Multiplying conjugate binomials: Univariate
alge765 Multiplying binomials in two variables
alge032 Squaring a binomial: Univariate
alge180 Multiplication involving binomials and trinomials in two variables
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge039 Factoring a quadratic with leading coefficient 1
alge043 Factoring a perfect square trinomial
alge040 Factoring a quadratic with leading coefficient greater than 1
alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
alge041 Factoring a product of a quadratic trinomial and a monomial
alge624 Factoring a difference of squares
alge038 Factoring a polynomial by grouping: Problem type 1
alge181 Factoring a polynomial by grouping: Problem type 2
alge681 Solving an equation written in factored form
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
alge094 Completing the square
alge780 Solving a quadratic equation by completing the square: Exact answers
alge095 Applying the quadratic formula: Exact answers

alge214 Discriminant of a quadratic equation
alge703 Solving a word problem using a quadratic equation with rational roots
alge524 Solving a word problem using a quadratic equation with irrational roots
pcalc037 Scalar multiplication of a matrix
pcalc038 Addition or subtraction of matrices
pcalc740 Linear combination of matrices
alge277 Finding the x-intercept(s) and the vertex of a parabola
pcalc775 Finding the maximum or minimum of a quadratic function
alge785 Word problem involving the maximum or minimum of a quadratic function
alge252 Graphing a parabola of the form $y = ax^2$
alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
alge702 Classifying the graph of a function
alge723 How the leading coefficient affects the shape of a parabola
alge715 Domain of a rational function: Excluded values
alge710 Simplifying a ratio of polynomials: Problem type 1
alge682 Simplifying a ratio of polynomials: Problem type 2
alge053 Multiplying rational expressions involving multivariate monomials
alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
alge054 Dividing rational expressions involving multivariate monomials
alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge056 Adding rational expressions with common denominators and binomial numerators
alge057 Adding rational expressions with different denominators: ax , bx
alge226 Adding rational expressions with multivariate monomial denominators: Advanced
alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
alge661 Adding rational expressions involving different quadratic denominators
arith695 Complex fraction without variables: Problem type 1
arith696 Complex fraction without variables: Problem type 2
alge058 Complex fraction involving multivariate monomials
alge767 Complex fraction: GCF and quadratic factoring
alge768 Complex fraction made of sums involving rational expressions
alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
pcalc789 Finding the asymptotes of a rational function: Basic
pcalc108 Graphing a rational function: Constant or linear over linear
arith612 Word problem involving multiple rates
alge770 Solving a work problem using a rational equation
alge220 Word problem on inverse proportions
pcalc681 Writing an equation that models variation
alge175 Word problem on direct variation
alge176 Word problem on inverse variation
alge772 Word problem on combined variation
alge213 Domain of a square root function
pcalc781 Graphing a square root function
alge264 Square root of a perfect square monomial
alge080 Simplifying a radical expression with an even exponent
alge275 Simplifying a radical expression with two variables
alge276 Simplifying a product involving square roots using the distributive property: Advanced
alge774 Special products of radical expressions: Conjugates and squaring
alge088 Rationalizing the denominator of a radical expression using conjugates
alge812 Converting between radical form and exponent form
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge251 Rational exponents: Negative exponents and fractional bases
alge773 Rational exponents: Products and quotients with negative exponents
alge249 Rational exponents: Powers of powers with negative exponents
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
alge091 Solving a radical equation that simplifies to a quadratic equation: One radical

alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest

B.57 Prep. for IN Algebra 1 ECA

Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith697 Mixed arithmetic operations with fractions
 arith095 Multi-step word problem involving fractions and multiplication
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith085 Addition or subtraction of mixed numbers with different denominators
 arith020 Mixed number multiplication: Problem type 1
 arith068 Mixed number division
 arith110 Decimal place value: Tenths and hundredths
 arith221 Rounding decimals
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals

arith609 Ordering fractions and decimals
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith625 Subtraction of aligned decimals
 arith131 Estimating a decimal sum or difference
 arith017 Multiplication of a decimal by a whole number
 arith082 Multiplication of a decimal by a power of ten
 arith055 Decimal multiplication: Problem type 1
 arith081 Division of a decimal by a whole number
 arith083 Division of a decimal by a power of ten
 arith019 Division of a decimal by a 2-digit decimal
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith628 Word problem with multiple decimal operations: Problem type 1
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2

arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions

alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement

alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules

alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x- and y-intercepts
 alge881 Graphing a line by first finding its x- and y-intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y-intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge070 Writing an equation of a line given the y-intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule

alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials

alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola

pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane

pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph

geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.58 Prep. for LA Algebra 1 EOC Assessment

Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents

arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios

geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients

alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion

alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1

alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines

alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge070 Writing an equation of a line given the y-intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs

alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent

arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1

alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation

alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx

alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions

mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.59 Prep. for LA Geometry EOC Assessment

Arithmetic Readiness

arith233 Introduction to exponents
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 arith056 Factors
 arith070 Least common multiple of 2 numbers
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith801 Finding the LCD of two fractions
 arith230 Addition or subtraction of fractions with different denominators
 arith086 Product of a fraction and a whole number: Problem type 1
 arith053 Fraction multiplication
 arith088 The reciprocal of a number
 arith022 Fraction division
 arith015 Writing an improper fraction as a mixed number
 arith110 Decimal place value: Tenths and hundredths
 arith221 Rounding decimals
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith118 Order of operations with integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions

arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced
 alge086 Rationalizing the denominator of a radical expression

Equations and Inequalities

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression
 alge187 Properties of addition
 alge188 Properties of real numbers
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge740 Multiplicative property of equality with integers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge272 Solving a proportion of the form $x/a = b/c$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 arith663 Writing ratios for real-world situations
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 unit034 Converting between metric and U.S. Customary unit systems
 alge015 Translating a sentence by using an inequality symbol
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge746 Solving a compound linear inequality: Graph solution, basic

Linear Equations in Two Variables

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x- and y-intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 mstat051 Choosing a graph to fit a narrative: Advanced
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation

Reasoning, Lines, and Angles

alge807 Finding the next terms of a sequence with whole numbers
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge732 Finding patterns in shapes
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic008 Conditional statements and deductive reasoning
 geom349 Naming segments, rays, and lines
 geom525 Computing distances between decimals on the number line
 geom526 Midpoint of a number line segment
 geom521 Segment addition and midpoints
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 geom358 Identifying parallel and perpendicular lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 geom154 Constructing the perpendicular bisector of a line segment
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom304 Identifying corresponding and alternate angles
 geom305 Identifying supplementary and vertical angles
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom850 Angle addition with relationships between angles

geom851 Angle addition and angle bisectors
geom611 Proofs involving angle congruence
geom158 Constructing an angle bisector
geom159 Constructing congruent angles

Triangles

geom306 Acute, obtuse, and right triangles
geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
geom801 Area of a triangle
geom001 Finding an angle measure of a triangle given two angles
geom502 Finding angle measures of a right or isosceles triangle given angles with variables
geom908 Finding an angle measure for a triangle with an extended side
geom309 Finding an angle measure for a triangle sharing a side with another triangle
geom812 Finding an angle measure given extended triangles
geom813 Finding an angle measure given a triangle and parallel lines
geom844 Using triangle inequality to determine if side lengths form a triangle
geom845 Using triangle inequality to determine possible lengths of a third side
geom854 Relationship between angle measures and side lengths in a triangle
geom855 Relationship between angle measures and side lengths in two triangles
geom650 Indirect proof (proof by contradiction)
geom359 Identifying congruent shapes on a grid
geom520 Identifying and naming congruent triangles
geom617 Proofs involving congruent triangles and vertical angles or the reflexive property
geom837 Proofs involving congruent triangles and segment or angle bisectors
geom840 Proofs involving congruent triangles that overlap: Basic
geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
geom843 Proofs involving congruent triangles that overlap: Advanced
geom044 Pythagorean Theorem
geom068 Computing an area using the Pythagorean Theorem
geom862 Using the Pythagorean Theorem repeatedly
geom506 Special right triangles: Exact answers

Polygons

geom310 Properties of quadrilaterals
geom523 Conditions for quadrilaterals
geom532 Classifying parallelograms
geom819 Finding coordinates of vertices of polygons
geom818 Finding the coordinates of a point to make a parallelogram
geom863 Congruence in the coordinate plane
geom870 Sum of the angle measures of a quadrilateral
geom528 Finding measures involving diagonals of parallelograms
geom527 Conditions for parallelograms
geom833 Finding measures involving diagonals of rectangles
geom834 Finding measures involving diagonals of rhombi
geom852 The sum of interior angle measures in a convex polygon
geom853 Interior and exterior angle measures in a regular polygon
geom300 Perimeter of a square or a rectangle
geom339 Perimeter of a polygon
geom221 Finding the missing length in a figure
geom353 Perimeter of a piecewise rectangular figure
geom817 Finding a side length given the perimeter and side lengths with variables
geom078 Sides of polygons having the same perimeter
geom019 Area of a square or a rectangle
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom340 Area of a piecewise rectangular figure

geom142 Word problem involving the area between two rectangles
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alge724 Finding an area in terms of variables

Similarity, Trigonometry, and Transformations

geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom507 Right triangles and geometric mean
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc033 Solving a triangle with the law of cosines
 geom357 Identifying transformations
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom335 Rotating a figure about the origin
 geom815 Finding an angle of rotation
 geom831 Rotational and point symmetries
 geom336 Dilating a figure
 pcalc060 Magnitude of a vector given in component form
 pcalc063 Translation of a vector
 geom858 Scalar multiplication of a vector: Geometric Approach
 geom857 Vector addition: Geometric approach
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph

Circles

geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom511 Lengths of chords, secants, and tangents
 geom514 Inscribed angles of a circle
 geom512 Central angles and inscribed angles of a circle
 geom513 Angles of intersecting secants and tangents
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference

geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom805 Arc length and area of a sector of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom212 Circles inscribed in and circumscribed about regular polygons
 pcalc605 Graphing a circle given its equation in standard form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter

Volumes and Surface Areas

geom830 Counting the cubes in a solid made of cubes
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of π
 geom841 Volume of a sphere
 geom348 Vertices, edges, and faces of a solid
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom816 Side views of a solid made of cubes
 geom031 Surface area of a cube or a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of π
 geom338 Surface area involving prisms or cylinders
 geom842 Surface area of a sphere
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Statistics and Probability

mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 mstat049 Computing a percentage from a table of values
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice

mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

Removed Topics - Arithmetic, Equations, Inequalities

arith033 Greatest common factor of 2 numbers
 arith123 Rounding to hundreds or thousands
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith658 Filling in missing operations to make an equation
 arith034 Prime numbers
 arith035 Prime factorization
 arith064 Solving a word problem on proportions using a unit rate
 arith657 Understanding the distributive property
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith079 Product of a unit fraction and a whole number
 arith119 Introduction to fraction multiplication
 arith694 Division involving a whole number and a fraction
 arith697 Mixed arithmetic operations with fractions
 arith619 Writing a mixed number as an improper fraction
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith020 Mixed number multiplication: Problem type 1
 arith068 Mixed number division
 arith220 Decimal place value: Hundreds to ten thousandths
 arith608 Ordering decimals
 arith609 Ordering fractions and decimals
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith013 Decimal addition with 3 numbers
 arith625 Subtraction of aligned decimals
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith017 Multiplication of a decimal by a whole number
 arith082 Multiplication of a decimal by a power of ten
 arith055 Decimal multiplication: Problem type 1
 arith081 Division of a decimal by a whole number
 arith083 Division of a decimal by a power of ten
 mstat034 Measuring length to the nearest quarter or half inch
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith226 Converting between percentages and decimals

arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith090 Converting a percentage to a fraction in simplest form
arith232 Finding simple interest without a calculator
arith698 Applying the percent equation
arith074 Finding the sale price without a calculator given the original price and percent discount
arith031 Finding the original price given the sale price and percent discount
arith225 Finding the percentage increase or decrease: Advanced
arith699 Writing a signed number for a real-world situation
mstat038 Reading the temperature from a thermometer
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
alge009 Additive property of equality with whole numbers
alge800 Additive property of equality with decimals
alge008 Multiplicative property of equality with whole numbers
alge825 Multiplicative property of equality with decimals
alge824 Solving a two-step equation with signed decimals
alge200 Solving an equation to find the value of an expression
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge733 Writing a one-step expression for a real-world situation
alge602 Writing a one-step variable expression for a real-world situation
alge730 Writing a multi-step equation for a real-world situation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge014 Solving a word problem with two unknowns using a linear equation
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge823 Solving a one-step word problem using the formula $d = rt$
alge218 Solving a word problem involving rates and time conversion
alge796 Solving a distance, rate, time problem using a linear equation
alge186 Translating a sentence into a compound inequality
alge207 Solving a linear inequality: Problem type 4
alge745 Solving a linear inequality: Problem type 5
alge748 Writing an inequality for a real-world situation
alge749 Solving a decimal word problem using a two-step linear inequality
alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
alge270 Solving an absolute value equation of the form $a - x = b$ or $-x + a = b$
alge103 Solving an absolute value equation of the form $-ax + b = c$
alge170 Solving an absolute value inequality: Basic
mstat004 Constructing a histogram for numerical data
mstat006 Constructing a box-and-whisker plot
mstat031 Interpreting a stem-and-leaf plot
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat025 Finding if a question can be answered by the data
stat802 Rejecting unreasonable claims based on average statistics
stat805 Making a reasonable inference based on proportion statistics
stat021 Population standard deviation
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat001 Mean of a data set
mstat028 Mean and median of a data set
stat803 Finding the value for a new score that will yield a given mean
mstat029 How changing a value affects the mean and median
mstat053 Choosing the best measure to describe data

mstat066 Weighted mean

Removed Topics - Advanced Algebra

alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 set004 Set builder and interval notation
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 pcalc768 Finding the average rate of change of a function
 fun019 Sum, difference, and product of two functions
 fun022 Composition of two functions: Basic
 fun002 Graphing integer functions
 pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 pcalc114 Even and odd functions: Problem type 1
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge079 Graphing a system of two linear inequalities: Basic
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents

alge024 Introduction to the product rule of exponents
alge030 Product rule with positive exponents: Multivariate
alge028 Product rule with negative exponents
alge827 Introduction to the quotient rule of exponents
alge026 Quotient of expressions involving exponents
alge755 Quotient rule with negative exponents: Problem type 1
alge826 Understanding the power rules of exponents
alge754 Introduction to the power rules of exponents
alge027 Power rules with positive exponents
alge025 Power of a power rule with negative exponents
alge799 Power rules with negative exponents
alge756 Power and product rules with positive exponents
arith029 Ordering numbers with positive exponents
alge758 Degree and leading coefficient of a univariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge764 Multiplying conjugate binomials: Univariate
alge765 Multiplying binomials in two variables
alge032 Squaring a binomial: Univariate
alge180 Multiplication involving binomials and trinomials in two variables
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge039 Factoring a quadratic with leading coefficient 1
alge043 Factoring a perfect square trinomial
alge040 Factoring a quadratic with leading coefficient greater than 1
alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
alge041 Factoring a product of a quadratic trinomial and a monomial
alge624 Factoring a difference of squares
alge038 Factoring a polynomial by grouping: Problem type 1
alge181 Factoring a polynomial by grouping: Problem type 2
alge681 Solving an equation written in factored form
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
alge094 Completing the square
alge780 Solving a quadratic equation by completing the square: Exact answers
alge095 Applying the quadratic formula: Exact answers
alge214 Discriminant of a quadratic equation
alge703 Solving a word problem using a quadratic equation with rational roots
alge524 Solving a word problem using a quadratic equation with irrational roots
pcalc037 Scalar multiplication of a matrix
pcalc038 Addition or subtraction of matrices
pcalc740 Linear combination of matrices
alge277 Finding the x-intercept(s) and the vertex of a parabola
pcalc775 Finding the maximum or minimum of a quadratic function
alge785 Word problem involving the maximum or minimum of a quadratic function
alge252 Graphing a parabola of the form $y = ax^2$
alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
alge702 Classifying the graph of a function
alge723 How the leading coefficient affects the shape of a parabola
alge715 Domain of a rational function: Excluded values

alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation
 alge772 Word problem on combined variation
 alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest

B.60 Prep. for MN Mathematics GRAD

Arithmetic Readiness

arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith101 Estimating a sum of whole numbers
arith233 Introduction to exponents
arith692 Writing expressions using exponents
arith683 Power of 10: Positive exponent
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
alge731 Evaluating an algebraic expression: Whole numbers with two operations
alge832 Evaluating an algebraic expression: Whole number operations and exponents
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1

geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents

alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation

alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line

alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept

alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y -intercept
 alge070 Writing an equation of a line given the y -intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function

alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1

alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate

alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation

fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values

alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values

stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

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Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number

arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom031 Surface area of a cube or a rectangular prism
geom091 Surface area of a triangular prism
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom842 Surface area of a sphere
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere

geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
mstat038 Reading the temperature from a thermometer
arith699 Writing a signed number for a real-world situation
alge286 Plotting integers on a number line
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith712 Ordering real numbers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith116 Signed fraction addition or subtraction: Basic
arith106 Signed fraction addition or subtraction: Advanced
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
alge984 Classifying sums and products as rational or irrational
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
arith071 Absolute value of a number
arith104 Operations with absolute value: Problem type 2
geom525 Computing distances between decimals on the number line
alge187 Properties of addition
alge188 Properties of real numbers
arith657 Understanding the distributive property
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
alge663 Combining like terms: Advanced
alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
alge801 Additive property of equality with fractions and mixed numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers
alge266 Additive property of equality with a negative coefficient
alge836 Additive property of equality with signed fractions
alge008 Multiplicative property of equality with whole numbers
alge820 Multiplicative property of equality with fractions

alge825 Multiplicative property of equality with decimals
alge797 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge803 Using two steps to solve an equation with whole numbers
alge006 Solving a two-step equation with integers
alge837 Solving a multi-step equation given in fractional form
alge208 Solving a two-step equation with signed fractions
alge824 Solving a two-step equation with signed decimals
alge200 Solving an equation to find the value of an expression
alge920 Introduction to solving an equation with parentheses
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge986 Identifying properties used to solve a linear equation
alge810 Introduction to algebraic symbol manipulation
alge743 Algebraic symbol manipulation: Problem type 1
alge744 Algebraic symbol manipulation: Problem type 2
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
alge016 Translating a sentence into a one-step equation
alge841 Translating a sentence into a multi-step equation
alge730 Writing a multi-step equation for a real-world situation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge014 Solving a word problem with two unknowns using a linear equation
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge823 Solving a one-step word problem using the formula $d = rt$
alge218 Solving a word problem involving rates and time conversion
alge796 Solving a distance, rate, time problem using a linear equation
geom817 Finding a side length given the perimeter and side lengths with variables
geom217 Finding the side length of a rectangle given its perimeter or area
geom143 Finding the perimeter or area of a rectangle given one of these values
geom530 Solving equations involving vertical angles
geom001 Finding an angle measure of a triangle given two angles
geom502 Finding angle measures of a right or isosceles triangle given angles with variables
stat803 Finding the value for a new score that will yield a given mean
arith663 Writing ratios for real-world situations
alge272 Solving a proportion of the form $x/a = b/c$
alge840 Solving a proportion of the form $(x+a)/b = c/d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
arith064 Solving a word problem on proportions using a unit rate
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2

geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4

alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x- and y-intercepts
 alge881 Graphing a line by first finding its x- and y-intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y-intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge070 Writing an equation of a line given the y-intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation

alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2×2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3×3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations

alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest

alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1

alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square

arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced

arith612 Word problem involving multiple rates
alge770 Solving a work problem using a rational equation
alge902 Identifying direct and inverse variation from ordered pairs and writing equations
alge903 Identifying direct and inverse variation equations
alge905 Writing an inverse variation equation
alge176 Word problem on inverse variation
alge220 Word problem on inverse proportions
pcalc789 Finding the asymptotes of a rational function: Basic
pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat007 Interpreting a line graph
stat804 Interpreting a circle graph or pie chart
stat801 Computations from a circle graph
geom814 Angle measure in a circle graph
mstat031 Interpreting a stem-and-leaf plot
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat001 Mean of a data set
mstat028 Mean and median of a data set
mstat066 Weighted mean
mstat029 How changing a value affects the mean and median
mstat053 Choosing the best measure to describe data
stat802 Rejecting unreasonable claims based on average statistics
mstat025 Finding if a question can be answered by the data
mstat049 Computing a percentage from a table of values
stat020 Calculating relative frequencies in a contingency table
stat805 Making a reasonable inference based on proportion statistics
stat009 Percentiles
mstat072 Five-number summary and interquartile range
stat021 Population standard deviation
mstat042 Interpreting a Venn diagram of 2 sets
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
stat790 Permutations, combinations, and the multiplication principle for counting
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
mstat048 Odds of an event
stat106 Outcomes and event probability
stat112 Probabilities involving two dice
mstat011 Area as probability
mstat046 Experimental and theoretical probability
mstat047 Introduction to expectation
mstat012 Probability of independent events
mstat013 Probability of dependent events
mstat032 Probability of the union of two events

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Arithmetic Readiness

arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith101 Estimating a sum of whole numbers
arith233 Introduction to exponents
arith692 Writing expressions using exponents
arith683 Power of 10: Positive exponent
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
alge731 Evaluating an algebraic expression: Whole numbers with two operations
alge832 Evaluating an algebraic expression: Whole number operations and exponents
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number

arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom031 Surface area of a cube or a rectangular prism
geom091 Surface area of a triangular prism
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom842 Surface area of a sphere
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere
geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
mstat038 Reading the temperature from a thermometer
arith699 Writing a signed number for a real-world situation
alge286 Plotting integers on a number line
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith712 Ordering real numbers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith701 Word problem with addition or subtraction of integers
arith116 Signed fraction addition or subtraction: Basic
arith106 Signed fraction addition or subtraction: Advanced
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
alge984 Classifying sums and products as rational or irrational

arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation

alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality

alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form

alge197 Graphing a line given its x- and y-intercepts
alge881 Graphing a line by first finding its x- and y-intercepts
alge196 Graphing a line through a given point with a given slope
alge882 Graphing a line by first finding its slope and y-intercept
alge883 Graphing a line given its equation in point-slope form
alge198 Graphing a vertical or horizontal line
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge884 Finding x- and y-intercepts given the graph of a line on a grid
alge924 Finding x- and y-intercepts of a line given the equation: Basic
alge210 Finding x- and y-intercepts of a line given the equation: Advanced
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
alge892 Writing an equation and graphing a line given its slope and y-intercept
alge070 Writing an equation of a line given the y-intercept and another point
alge893 Writing an equation in slope-intercept form given the slope and a point
alge894 Writing an equation in point-slope form given the slope and a point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
mstat052 Identifying independent and dependent variables from equations or real-world situations
alge990 Domain and range of a linear function that models a real-world situation
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge895 Identifying parallel and perpendicular lines from equations
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
alge991 Solving a linear equation by graphing
mstat051 Choosing a graph to fit a narrative: Advanced
alge828 Interpreting direct variation from a graph
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
alge925 Finding the next terms of an arithmetic sequence with whole numbers
alge906 Finding the next terms of an arithmetic sequence with integers
alge979 Identifying arithmetic sequences and finding the common difference
alge931 Finding a specified term of an arithmetic sequence given the first terms
pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
alge909 Writing an explicit rule for an arithmetic sequence
alge908 Finding the first terms of a sequence using a recursive rule
alge910 Writing a recursive rule for an arithmetic sequence
mstat023 Scatter plots and correlation
mstat030 Sketching the line of best fit
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat069 Computing residuals
mstat070 Interpreting residual plots
mstat071 Linear relationship and the correlation coefficient
mstat074 Identifying correlation and causation
alge898 Translating the graph of an absolute value function: One step
alge899 Translating the graph of an absolute value function: Two steps

alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents

alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate

alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients

alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics

mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.63 Prep. for SC HSAP Mathematics

Arithmetic Readiness

arith123 Rounding to hundreds or thousands
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 arith658 Filling in missing operations to make an equation
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication

arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith697 Mixed arithmetic operations with fractions
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith020 Mixed number multiplication: Problem type 1
 arith068 Mixed number division
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith221 Rounding decimals
 arith608 Ordering decimals
 arith609 Ordering fractions and decimals
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith013 Decimal addition with 3 numbers
 arith625 Subtraction of aligned decimals
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith017 Multiplication of a decimal by a whole number
 arith082 Multiplication of a decimal by a power of ten
 arith055 Decimal multiplication: Problem type 1
 arith081 Division of a decimal by a whole number
 arith083 Division of a decimal by a power of ten
 mstat034 Measuring length to the nearest quarter or half inch
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith699 Writing a signed number for a real-world situation
 mstat038 Reading the temperature from a thermometer
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic

arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith118 Order of operations with integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression

Linear Equations and Inequalities

alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge740 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge602 Writing a one-step variable expression for a real-world situation
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$

alge014 Solving a word problem with two unknowns using a linear equation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith226 Converting between percentages and decimals
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith090 Converting a percentage to a fraction in simplest form
 arith069 Writing a ratio as a percentage without a calculator
 mstat049 Computing a percentage from a table of values
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 alge015 Translating a sentence by using an inequality symbol
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge207 Solving a linear inequality: Problem type 4
 alge745 Solving a linear inequality: Problem type 5
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge748 Writing an inequality for a real-world situation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge270 Solving an absolute value equation of the form $a-x = b$ or $-x+a = b$
 alge103 Solving an absolute value equation of the form $-ax+b = c$
 alge170 Solving an absolute value inequality: Basic

Lines and Systems of Linear Equations

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x - and y -intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge069 Finding the y -intercept of a line given its equation
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid

alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge079 Graphing a system of two linear inequalities: Basic
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices

Exponents, Polynomials, and Quadratics

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 arith029 Ordering numbers with positive exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge758 Degree and leading coefficient of a univariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials

alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge764 Multiplying conjugate binomials: Univariate
 alge765 Multiplying binomials in two variables
 alge032 Squaring a binomial: Univariate
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge043 Factoring a perfect square trinomial
 alge040 Factoring a quadratic with leading coefficient greater than 1
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge624 Factoring a difference of squares
 alge038 Factoring a polynomial by grouping: Problem type 1
 alge181 Factoring a polynomial by grouping: Problem type 2
 alge681 Solving an equation written in factored form
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge252 Graphing a parabola of the form $y = ax^2$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 alge702 Classifying the graph of a function
 alge723 How the leading coefficient affects the shape of a parabola

Functions and Sequences

set004 Set builder and interval notation
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 pcalc768 Finding the average rate of change of a function
 fun019 Sum, difference, and product of two functions
 fun022 Composition of two functions: Basic
 fun002 Graphing integer functions

pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 pcalc114 Even and odd functions: Problem type 1
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge807 Finding the next terms of a sequence with whole numbers
 alge732 Finding patterns in shapes
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest

Radical Expressions

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals

Rational Expressions

alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2

alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation
 alge772 Word problem on combined variation
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Perimeter, Area, and Volume

geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alge724 Finding an area in terms of variables
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles

geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom805 Arc length and area of a sector of a circle
 geom830 Counting the cubes in a solid made of cubes
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom348 Vertices, edges, and faces of a solid
 geom816 Side views of a solid made of cubes
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom338 Surface area involving prisms or cylinders

Lines, Angles, and Triangles

mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic008 Conditional statements and deductive reasoning
 geom349 Naming segments, rays, and lines
 geom525 Computing distances between decimals on the number line
 geom526 Midpoint of a number line segment
 geom521 Segment addition and midpoints
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom358 Identifying parallel and perpendicular lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 geom154 Constructing the perpendicular bisector of a line segment
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom304 Identifying corresponding and alternate angles
 geom305 Identifying supplementary and vertical angles
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom611 Proofs involving angle congruence
 geom159 Constructing congruent angles
 geom158 Constructing an angle bisector
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom812 Finding an angle measure given extended triangles

geom813 Finding an angle measure given a triangle and parallel lines
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom845 Using triangle inequality to determine possible lengths of a third side
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom044 Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom506 Special right triangles: Exact answers
 geom212 Circles inscribed in and circumscribed about regular polygons
 geom520 Identifying and naming congruent triangles
 geom617 Proofs involving congruent triangles and vertical angles or the reflexive property
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom650 Indirect proof (proof by contradiction)
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc033 Solving a triangle with the law of cosines
 pcalc060 Magnitude of a vector given in component form
 pcalc063 Translation of a vector
 geom858 Scalar multiplication of a vector: Geometric Approach
 geom857 Vector addition: Geometric approach
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph

Polygons, Circles, and Similarity

alge191 Midpoint of a line segment in the plane
 alge132 Distance between two points in the plane: Exact answers
 geom310 Properties of quadrilaterals
 geom523 Conditions for quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom834 Finding measures involving diagonals of rhombi
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon
 geom853 Interior and exterior angle measures in a regular polygon
 geom819 Finding coordinates of vertices of polygons
 geom818 Finding the coordinates of a point to make a parallelogram
 geom863 Congruence in the coordinate plane
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom511 Lengths of chords, secants, and tangents

geom514 Inscribed angles of a circle
 geom512 Central angles and inscribed angles of a circle
 geom513 Angles of intersecting secants and tangents
 pcalc605 Graphing a circle given its equation in standard form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom507 Right triangles and geometric mean
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2
 geom357 Identifying transformations
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom335 Rotating a figure about the origin
 geom815 Finding an angle of rotation
 geom831 Rotational and point symmetries
 geom336 Dilating a figure

Statistics and Probability

mstat004 Constructing a histogram for numerical data
 mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 mstat006 Constructing a box-and-whisker plot
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 geom814 Angle measure in a circle graph
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 mstat066 Weighted mean
 mstat025 Finding if a question can be answered by the data
 stat802 Rejecting unreasonable claims based on average statistics
 stat805 Making a reasonable inference based on proportion statistics
 stat021 Population standard deviation
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event

stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.64 TX Algebra 1

Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith070 Least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith064 Solving a word problem on proportions using a unit rate
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith618 Addition or subtraction of fractions with the same denominator
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith821 Exponents and fractions
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith085 Addition or subtraction of mixed numbers with different denominators
 arith020 Mixed number multiplication: Problem type 1
 arith068 Mixed number division
 arith110 Decimal place value: Tenths and hundredths

arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith082 Multiplication of a decimal by a power of ten
arith628 Word problem with multiple decimal operations: Problem type 1
arith081 Division of a decimal by a whole number
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith226 Converting between percentages and decimals
arith090 Converting a percentage to a fraction in simplest form
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith069 Writing a ratio as a percentage without a calculator
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom802 Circumference and area of a circle
geom302 Area involving rectangles and circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom031 Surface area of a cube or a rectangular prism
geom091 Surface area of a triangular prism
geom621 Surface area of a cylinder
geom842 Surface area of a sphere
geom311 Volume of a rectangular prism
geom090 Volume of a triangular prism
geom033 Volume of a pyramid
geom035 Volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom841 Volume of a sphere

Real Numbers

arith687 Fractional position on a number line
alge286 Plotting integers on a number line
arith605 Plotting rational numbers on a number line
arith699 Writing a signed number for a real-world situation
arith092 Using a common denominator to order fractions
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith691 Ordering integers
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root

arith712 Ordering real numbers
 arith071 Absolute value of a number
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith440 Operations with absolute value: Problem type 1
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge187 Properties of addition
 arith657 Understanding the distributive property
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form

alge986 Identifying properties used to solve a linear equation
alge824 Solving a two-step equation with signed decimals
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge208 Solving a two-step equation with signed fractions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge810 Introduction to algebraic symbol manipulation
alge743 Algebraic symbol manipulation: Problem type 1
alge744 Algebraic symbol manipulation: Problem type 2
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
alge016 Translating a sentence into a one-step equation
alge841 Translating a sentence into a multi-step equation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge014 Solving a word problem with two unknowns using a linear equation
alge730 Writing a multi-step equation for a real-world situation
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge823 Solving a one-step word problem using the formula $d = rt$
alge218 Solving a word problem involving rates and time conversion
alge796 Solving a distance, rate, time problem using a linear equation
geom817 Finding a side length given the perimeter and side lengths with variables
geom217 Finding the side length of a rectangle given its perimeter or area
geom143 Finding the perimeter or area of a rectangle given one of these values
geom838 Circumference ratios
geom039 Finding supplementary and complementary angles
geom530 Solving equations involving vertical angles
geom001 Finding an angle measure of a triangle given two angles
geom623 Finding angle measures of a triangle given angles with variables
arith663 Writing ratios for real-world situations
alge272 Solving a proportion of the form $x/a = b/c$
alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge060 Solving a rational equation that simplifies to linear: Denominator x
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
arith030 Finding a percentage of a whole number without a calculator: Basic
arith698 Applying the percent equation
arith074 Finding the sale price without a calculator given the original price and percent discount
arith031 Finding the original price given the sale price and percent discount
arith225 Finding the percentage increase or decrease: Advanced

alge795 Solving a percent mixture problem using a linear equation
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set002 Union and intersection of finite sets
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge846 Translating a sentence into a multi-step inequality
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Lines and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane

alge850 Table for a linear equation
alge873 Identifying solutions to a linear equation in two variables
alge066 Finding a solution to a linear equation in two variables
alge877 Graphing a linear equation of the form $y = mx$
alge878 Graphing a line given its equation in slope-intercept form: Integer slope
alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
alge880 Graphing a line given its equation in standard form
alge198 Graphing a vertical or horizontal line
alge884 Finding x - and y -intercepts given the graph of a line on a grid
alge924 Finding x - and y -intercepts of a line given the equation: Basic
alge210 Finding x - and y -intercepts of a line given the equation: Advanced
alge197 Graphing a line given its x - and y -intercepts
alge881 Graphing a line by first finding its x - and y -intercepts
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y -intercept
alge196 Graphing a line through a given point with a given slope
mstat007 Interpreting a line graph
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
fun005 Writing a function rule given a table of ordered pairs: One-step rules
fun006 Writing a function rule given a table of ordered pairs: Two-step rules
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y -intercept
alge258 Writing an equation of a line given its slope and y -intercept
alge892 Writing an equation and graphing a line given its slope and y -intercept
alge314 Finding the slope, y -intercept, and equation for a linear function given a table of values
alge893 Writing an equation in slope-intercept form given the slope and a point
alge318 Finding the slope and a point on a line given its equation in point-slope form
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge313 Writing an equation in standard form given the slope and a point
alge070 Writing an equation of a line given the y -intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge322 Comparing linear functions to the parent function $y=x$
alge987 Comparing properties of linear functions given in different forms
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge992 Combining functions to write a new function that models a real-world situation
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
mstat052 Identifying independent and dependent variables from equations or real-world situations
alge991 Solving a linear equation by graphing
alge828 Interpreting direct variation from a graph
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
mstat030 Sketching the line of best fit

mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun030 Evaluating a piecewise-defined function
 fun033 Variable expressions as inputs of functions: Problem type 1
 alge990 Domain and range of a linear function that models a real-world situation
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 alge896 Graphing an integer function and finding its range for a given domain
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun031 Graphing a piecewise-defined function: Problem type 1
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
 pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
 alge317 Writing a system of linear equations given its graph
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition

alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
 alge316 Writing an inequality given its graph in the plane: Slanted boundary line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge756 Power and product rules with positive exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2

alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 arith094 Cube root of an integer
 alge812 Converting between radical form and exponent form
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge561 Rational exponents: Unit fraction exponents and bases involving signs
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)x$
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)x$
 alge321 Finding domain and range from the graph of an exponential function
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge830 Evaluating an exponential function that models a real-world situation
 arith853 Introduction to compound interest
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 mstat103 Choosing an exponential model and using it to make a prediction
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2

alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge605 Factoring a linear binomial
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes

Quadratic Equations and Functions

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 alge094 Completing the square
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge323 Finding the zeros of a quadratic function given its equation
 alge320 Writing a quadratic function given its zeros
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge277 Finding the x-intercept(s) and the vertex of a parabola

pcalc714 Using a graphing calculator to find the zeros of a quadratic function
 pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 alge957 Solving a quadratic equation by graphing
 alge319 Rewriting a quadratic function in standard form
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph
 alge994 Graphically solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 alge995 Solving a system of linear and quadratic equations

Radicals

alge213 Domain of a square root function
 alge539 Table for a square root function
 pcalc781 Graphing a square root function
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge984 Classifying sums and products as rational or irrational
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths

pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat031 Interpreting a stem-and-leaf plot

stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat009 Percentiles
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.65 Prep. for TX - STAAR Algebra 1

Arithmetic Readiness

arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith101 Estimating a sum of whole numbers
 arith233 Introduction to exponents
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 arith056 Factors

arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
arith212 Equivalent fractions
arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith618 Addition or subtraction of fractions with the same denominator
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith697 Mixed arithmetic operations with fractions
arith095 Multi-step word problem involving fractions and multiplication
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith085 Addition or subtraction of mixed numbers with different denominators
arith020 Mixed number multiplication: Problem type 1
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith222 Converting a fraction to a terminating decimal
arith089 Converting a fraction to a repeating decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith625 Subtraction of aligned decimals
arith131 Estimating a decimal sum or difference
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith055 Decimal multiplication: Problem type 1
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
arith019 Division of a decimal by a 2-digit decimal
arith626 Word problem with one decimal operation: Problem type 1
arith627 Word problem with one decimal operation: Problem type 2
arith628 Word problem with multiple decimal operations: Problem type 1
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom221 Finding the missing length in a figure
geom340 Area of a piecewise rectangular figure
geom142 Word problem involving the area between two rectangles
geom801 Area of a triangle
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom838 Circumference ratios
geom802 Circumference and area of a circle

geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom039 Finding supplementary and complementary angles

Real Numbers

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 alge286 Plotting integers on a number line
 arith687 Fractional position on a number line
 arith605 Plotting rational numbers on a number line
 arith691 Ordering integers
 arith712 Ordering real numbers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 alge984 Classifying sums and products as rational or irrational
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 geom525 Computing distances between decimals on the number line
 alge187 Properties of addition
 alge188 Properties of real numbers
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced

alge293 Combining like terms in a quadratic expression

Linear Equations

alge009 Additive property of equality with whole numbers
 alge801 Additive property of equality with fractions and mixed numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge837 Solving a multi-step equation given in fractional form
 alge208 Solving a two-step equation with signed fractions
 alge824 Solving a two-step equation with signed decimals
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge986 Identifying properties used to solve a linear equation
 alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge218 Solving a word problem involving rates and time conversion
 alge796 Solving a distance, rate, time problem using a linear equation

geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom530 Solving equations involving vertical angles
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 stat803 Finding the value for a new score that will yield a given mean
 arith663 Writing ratios for real-world situations
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith069 Writing a ratio as a percentage without a calculator
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith698 Applying the percent equation
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 unit052 Finding the absolute error and percent error of a measurement
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge846 Translating a sentence into a multi-step inequality
 alge748 Writing an inequality for a real-world situation
 alge729 Writing a multi-step inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2

alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge943 Writing an absolute value inequality given a graph on the number line
 alge868 Solving an absolute value inequality: Problem type 1
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

set001 Set builder notation
 set002 Union and intersection of finite sets
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 alge896 Graphing an integer function and finding its range for a given domain
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc761 Finding inputs and outputs of a function from its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge716 Introduction to the composition of two functions
 fun012 Inverse functions: Linear, discrete
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge873 Identifying solutions to a linear equation in two variables
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge196 Graphing a line through a given point with a given slope
 alge882 Graphing a line by first finding its slope and y -intercept
 alge883 Graphing a line given its equation in point-slope form
 alge198 Graphing a vertical or horizontal line
 alge876 Identifying linear equations: Advanced
 alge874 Identifying linear functions given ordered pairs
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope

alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge070 Writing an equation of a line given the y-intercept and another point
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge894 Writing an equation in point-slope form given the slope and a point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge990 Domain and range of a linear function that models a real-world situation
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge992 Combining functions to write a new function that models a real-world situation
 alge987 Comparing properties of linear functions given in different forms
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge895 Identifying parallel and perpendicular lines from equations
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge991 Solving a linear equation by graphing
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge828 Interpreting direct variation from a graph
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge908 Finding the first terms of a sequence using a recursive rule
 alge910 Writing a recursive rule for an arithmetic sequence
 mstat023 Scatter plots and correlation
 mstat030 Sketching the line of best fit
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat071 Linear relationship and the correlation coefficient
 mstat074 Identifying correlation and causation
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 fun030 Evaluating a piecewise-defined function
 fun031 Graphing a piecewise-defined function: Problem type 1

Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations

alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge988 Identifying the operations used to create equivalent systems of equations
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents

alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge827 Introduction to the quotient rule of exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge826 Understanding the power rules of exponents
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge927 Power and quotient rules with positive exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent

scinot002 Multiplying and dividing numbers written in scientific notation
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge971 Table for an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge993 Comparing linear, polynomial, and exponential functions
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge930 Greatest common factor of three univariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2

alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge703 Solving a word problem using a quadratic equation with rational roots

Quadratic Functions and Equations

alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 alge996 Comparing properties of quadratic functions given in different forms
 alge953 Translating the graph of a parabola: One step
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge702 Classifying the graph of a function
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge723 How the leading coefficient affects the shape of a parabola
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge957 Solving a quadratic equation by graphing
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge963 Applying the quadratic formula: Decimal answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots

alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph

Radicals

alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced

alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge903 Identifying direct and inverse variation equations
 alge905 Writing an inverse variation equation
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear

Data Analysis and Probability

mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat031 Interpreting a stem-and-leaf plot
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat001 Mean of a data set
 mstat028 Mean and median of a data set
 mstat066 Weighted mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 stat802 Rejecting unreasonable claims based on average statistics
 mstat025 Finding if a question can be answered by the data
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 stat009 Percentiles
 mstat072 Five-number summary and interquartile range
 stat021 Population standard deviation
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations

mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

B.66 Prep. for TX - STAAR Geometry

Arithmetic Readiness

arith233 Introduction to exponents
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 arith056 Factors
 arith070 Least common multiple of 2 numbers
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith801 Finding the LCD of two fractions
 arith230 Addition or subtraction of fractions with different denominators
 arith086 Product of a fraction and a whole number: Problem type 1
 arith053 Fraction multiplication
 arith088 The reciprocal of a number
 arith022 Fraction division
 arith015 Writing an improper fraction as a mixed number
 arith110 Decimal place value: Tenths and hundredths
 arith221 Rounding decimals
 arith013 Decimal addition with 3 numbers
 arith625 Subtraction of aligned decimals
 arith017 Multiplication of a decimal by a whole number
 arith082 Multiplication of a decimal by a power of ten
 arith055 Decimal multiplication: Problem type 1
 arith081 Division of a decimal by a whole number
 arith083 Division of a decimal by a power of ten
 arith030 Finding a percentage of a whole number without a calculator: Basic
 alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith701 Word problem with addition or subtraction of integers
 arith116 Signed fraction addition or subtraction: Basic
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers

arith822 Signed fraction multiplication: Basic
 arith118 Order of operations with integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith704 Exponents and signed fractions
 arith600 Order of operations with integers and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 arith032 Square root addition or subtraction
 arith039 Square root multiplication: Advanced
 alge086 Rationalizing the denominator of a radical expression
 mstat034 Measuring length to the nearest quarter or half inch
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat065 Converting between temperatures in Fahrenheit and Celsius

Equations and Inequalities

alge001 Identifying numbers as integers or non-integers
 alge002 Identifying numbers as rational or irrational
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression
 alge187 Properties of addition
 alge188 Properties of real numbers
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge740 Multiplicative property of equality with integers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions
 alge803 Using two steps to solve an equation with whole numbers
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution

alge810 Introduction to algebraic symbol manipulation
 alge743 Algebraic symbol manipulation: Problem type 1
 alge744 Algebraic symbol manipulation: Problem type 2
 alge272 Solving a proportion of the form $x/a = b/c$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 arith663 Writing ratios for real-world situations
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 alge015 Translating a sentence by using an inequality symbol
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line
 alge186 Translating a sentence into a compound inequality
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge207 Solving a linear inequality: Problem type 4
 alge745 Solving a linear inequality: Problem type 5
 alge746 Solving a compound linear inequality: Graph solution, basic

Linear Equations in Two Variables

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge850 Table for a linear equation
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x - and y -intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge069 Finding the y -intercept of a line given its equation
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y -intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 pcalc038 Addition or subtraction of matrices
 pcalc037 Scalar multiplication of a matrix
 pcalc740 Linear combination of matrices

Reasoning, Lines, and Angles

alge807 Finding the next terms of a sequence with whole numbers
 alge732 Finding patterns in shapes
 mstat042 Interpreting a Venn diagram of 2 sets

mstat043 Interpreting a Venn diagram of 3 sets
glogic001 Conditional statements and negations
glogic005 The converse, inverse, and contrapositive of a conditional statement
glogic008 Conditional statements and deductive reasoning
geom349 Naming segments, rays, and lines
geom525 Computing distances between decimals on the number line
geom526 Midpoint of a number line segment
geom521 Segment addition and midpoints
geom616 Introduction to proofs: Justifying statements
geom614 Proofs involving segment congruence
alge132 Distance between two points in the plane: Exact answers
alge191 Midpoint of a line segment in the plane
geom358 Identifying parallel and perpendicular lines
geom835 Introduction to proofs involving parallel lines
geom836 Proofs involving parallel lines
geom154 Constructing the perpendicular bisector of a line segment
geom150 Constructing a pair of perpendicular lines
geom157 Constructing a pair of parallel lines
geom151 Measuring an angle with the protractor
geom152 Drawing an angle with the protractor
geom303 Acute, obtuse, and right angles
geom039 Finding supplementary and complementary angles
geom304 Identifying corresponding and alternate angles
geom305 Identifying supplementary and vertical angles
geom530 Solving equations involving vertical angles
geom531 Solving equations involving angles and a pair of parallel lines
geom850 Angle addition with relationships between angles
geom851 Angle addition and angle bisectors
geom611 Proofs involving angle congruence
geom158 Constructing an angle bisector
geom159 Constructing congruent angles

Triangles

geom306 Acute, obtuse, and right triangles
geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
geom801 Area of a triangle
geom001 Finding an angle measure of a triangle given two angles
geom502 Finding angle measures of a right or isosceles triangle given angles with variables
geom908 Finding an angle measure for a triangle with an extended side
geom309 Finding an angle measure for a triangle sharing a side with another triangle
geom812 Finding an angle measure given extended triangles
geom813 Finding an angle measure given a triangle and parallel lines
geom844 Using triangle inequality to determine if side lengths form a triangle
geom845 Using triangle inequality to determine possible lengths of a third side
geom854 Relationship between angle measures and side lengths in a triangle
geom855 Relationship between angle measures and side lengths in two triangles
geom650 Indirect proof (proof by contradiction)
geom359 Identifying congruent shapes on a grid
geom520 Identifying and naming congruent triangles
geom617 Proofs involving congruent triangles and vertical angles or the reflexive property
geom837 Proofs involving congruent triangles and segment or angle bisectors
geom840 Proofs involving congruent triangles that overlap: Basic
geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
geom843 Proofs involving congruent triangles that overlap: Advanced
geom044 Pythagorean Theorem
geom862 Using the Pythagorean Theorem repeatedly
geom068 Computing an area using the Pythagorean Theorem
geom506 Special right triangles: Exact answers

Polygons

geom310 Properties of quadrilaterals
 geom523 Conditions for quadrilaterals
 geom532 Classifying parallelograms
 geom819 Finding coordinates of vertices of polygons
 geom818 Finding the coordinates of a point to make a parallelogram
 geom863 Congruence in the coordinate plane
 geom870 Sum of the angle measures of a quadrilateral
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom834 Finding measures involving diagonals of rhombi
 geom852 The sum of interior angle measures in a convex polygon
 geom853 Interior and exterior angle measures in a regular polygon
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alge724 Finding an area in terms of variables

Similarity, Trigonometry, and Transformations

geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom507 Right triangles and geometric mean
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc033 Solving a triangle with the law of cosines
 geom357 Identifying transformations
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom335 Rotating a figure about the origin

geom815 Finding an angle of rotation
 geom831 Rotational and point symmetries
 geom336 Dilating a figure
 pcalc060 Magnitude of a vector given in component form
 pcalc063 Translation of a vector
 geom858 Scalar multiplication of a vector: Geometric Approach
 geom857 Vector addition: Geometric approach
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph

Circles

geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom511 Lengths of chords, secants, and tangents
 geom512 Central angles and inscribed angles of a circle
 geom514 Inscribed angles of a circle
 geom513 Angles of intersecting secants and tangents
 geom814 Angle measure in a circle graph
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom802 Circumference and area of a circle
 geom805 Arc length and area of a sector of a circle
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom212 Circles inscribed in and circumscribed about regular polygons
 pcalc605 Graphing a circle given its equation in standard form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter

Volumes and Surface Areas

geom830 Counting the cubes in a solid made of cubes
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom348 Vertices, edges, and faces of a solid
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom816 Side views of a solid made of cubes
 geom031 Surface area of a cube or a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom338 Surface area involving prisms or cylinders

geom842 Surface area of a sphere
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Probability

mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat032 Probability of the union of two events

Removed Topics - Arithmetic, Equations, Inequalities

arith033 Greatest common factor of 2 numbers
 arith123 Rounding to hundreds or thousands
 arith692 Writing expressions using exponents
 arith683 Power of 10: Positive exponent
 arith658 Filling in missing operations to make an equation
 arith034 Prime numbers
 arith035 Prime factorization
 arith064 Solving a word problem on proportions using a unit rate
 arith657 Understanding the distributive property
 arith092 Using a common denominator to order fractions
 arith618 Addition or subtraction of fractions with the same denominator
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith079 Product of a unit fraction and a whole number
 arith119 Introduction to fraction multiplication
 arith694 Division involving a whole number and a fraction
 arith697 Mixed arithmetic operations with fractions
 arith619 Writing a mixed number as an improper fraction
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith020 Mixed number multiplication: Problem type 1
 arith068 Mixed number division
 arith220 Decimal place value: Hundreds to ten thousandths
 arith608 Ordering decimals
 arith609 Ordering fractions and decimals
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith226 Converting between percentages and decimals
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith090 Converting a percentage to a fraction in simplest form

mstat049 Computing a percentage from a table of values
arith069 Writing a ratio as a percentage without a calculator
arith698 Applying the percent equation
arith074 Finding the sale price without a calculator given the original price and percent discount
arith031 Finding the original price given the sale price and percent discount
arith225 Finding the percentage increase or decrease: Advanced
arith232 Finding simple interest without a calculator
stat804 Interpreting a circle graph or pie chart
stat801 Computations from a circle graph
arith699 Writing a signed number for a real-world situation
mstat038 Reading the temperature from a thermometer
arith687 Fractional position on a number line
arith605 Plotting rational numbers on a number line
alge009 Additive property of equality with whole numbers
alge800 Additive property of equality with decimals
alge008 Multiplicative property of equality with whole numbers
alge825 Multiplicative property of equality with decimals
alge824 Solving a two-step equation with signed decimals
alge200 Solving an equation to find the value of an expression
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge733 Writing a one-step expression for a real-world situation
alge602 Writing a one-step variable expression for a real-world situation
alge730 Writing a multi-step equation for a real-world situation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge014 Solving a word problem with two unknowns using a linear equation
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge823 Solving a one-step word problem using the formula $d = rt$
alge218 Solving a word problem involving rates and time conversion
alge796 Solving a distance, rate, time problem using a linear equation
alge748 Writing an inequality for a real-world situation
alge749 Solving a decimal word problem using a two-step linear inequality
alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
alge270 Solving an absolute value equation of the form $a-x = b$ or $-x+a = b$
alge103 Solving an absolute value equation of the form $-ax+b = c$
alge170 Solving an absolute value inequality: Basic
mstat025 Finding if a question can be answered by the data
stat802 Rejecting unreasonable claims based on average statistics
stat805 Making a reasonable inference based on proportion statistics
stat021 Population standard deviation
mstat004 Constructing a histogram for numerical data
mstat005 Constructing a bar graph for non-numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat007 Interpreting a line graph
mstat006 Constructing a box-and-whisker plot
mstat031 Interpreting a stem-and-leaf plot
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat001 Mean of a data set
mstat028 Mean and median of a data set

stat803 Finding the value for a new score that will yield a given mean
 mstat029 How changing a value affects the mean and median
 mstat053 Choosing the best measure to describe data
 mstat066 Weighted mean

Removed Topics - Advanced Algebra

set004 Set builder and interval notation
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 pcalc768 Finding the average rate of change of a function
 fun019 Sum, difference, and product of two functions
 fun022 Composition of two functions: Basic
 fun002 Graphing integer functions
 pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 pcalc114 Even and odd functions: Problem type 1
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge079 Graphing a system of two linear inequalities: Basic
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent

arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
alge791 Rewriting an algebraic expression without a negative exponent
alge821 Understanding the product rule of exponents
alge024 Introduction to the product rule of exponents
alge030 Product rule with positive exponents: Multivariate
alge028 Product rule with negative exponents
alge827 Introduction to the quotient rule of exponents
alge026 Quotient of expressions involving exponents
alge755 Quotient rule with negative exponents: Problem type 1
alge826 Understanding the power rules of exponents
alge754 Introduction to the power rules of exponents
alge027 Power rules with positive exponents
alge025 Power of a power rule with negative exponents
alge799 Power rules with negative exponents
alge756 Power and product rules with positive exponents
arith029 Ordering numbers with positive exponents
alge758 Degree and leading coefficient of a univariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge764 Multiplying conjugate binomials: Univariate
alge765 Multiplying binomials in two variables
alge032 Squaring a binomial: Univariate
alge180 Multiplication involving binomials and trinomials in two variables
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge039 Factoring a quadratic with leading coefficient 1
alge043 Factoring a perfect square trinomial
alge040 Factoring a quadratic with leading coefficient greater than 1
alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
alge041 Factoring a product of a quadratic trinomial and a monomial
alge624 Factoring a difference of squares
alge038 Factoring a polynomial by grouping: Problem type 1
alge181 Factoring a polynomial by grouping: Problem type 2
alge681 Solving an equation written in factored form
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
alge094 Completing the square
alge780 Solving a quadratic equation by completing the square: Exact answers
alge095 Applying the quadratic formula: Exact answers
alge214 Discriminant of a quadratic equation
alge703 Solving a word problem using a quadratic equation with rational roots
alge524 Solving a word problem using a quadratic equation with irrational roots
alge277 Finding the x-intercept(s) and the vertex of a parabola
pcalc775 Finding the maximum or minimum of a quadratic function
alge785 Word problem involving the maximum or minimum of a quadratic function
alge252 Graphing a parabola of the form $y = ax^2$
alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
alge702 Classifying the graph of a function
alge723 How the leading coefficient affects the shape of a parabola

alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge661 Adding rational expressions involving different quadratic denominators
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 pcalc789 Finding the asymptotes of a rational function: Basic
 pcalc108 Graphing a rational function: Constant or linear over linear
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation
 alge772 Word problem on combined variation
 alge213 Domain of a square root function
 pcalc781 Graphing a square root function
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest

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Integers, Fractions and Percents

arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith231 Integer multiplication and division
 arith048 Order of operations with whole numbers
 arith016 Square root of a perfect square
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith618 Addition or subtraction of fractions with the same denominator
 arith230 Addition or subtraction of fractions with different denominators
 arith106 Signed fraction addition or subtraction: Advanced
 arith086 Product of a fraction and a whole number: Problem type 1
 arith053 Fraction multiplication
 arith022 Fraction division
 arith105 Signed fraction multiplication: Advanced
 mstat034 Measuring length to the nearest quarter or half inch
 arith221 Rounding decimals
 arith224 Word problem with decimal addition and multiplication
 arith227 Word problem with decimal subtraction and division
 arith090 Converting a percentage to a fraction in simplest form
 arith686 Writing a ratio as a percentage
 mstat049 Computing a percentage from a table of values
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 stat801 Computations from a circle graph
 arith232 Finding simple interest without a calculator

Equations and Inequalities

alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge607 Combining like terms: Integer coefficients
 alge010 Additive property of equality with integers
 alge008 Multiplicative property of equality with whole numbers
 alge012 Multiplicative property of equality with signed fractions
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge810 Introduction to algebraic symbol manipulation
 alge160 Algebraic symbol manipulation
 alge015 Translating a sentence by using an inequality symbol
 alge729 Writing a multi-step inequality for a real-world situation
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge017 Graphing a linear inequality on the number line
 alge166 Graphing a compound inequality on the number line
 arith663 Writing ratios for real-world situations

arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge272 Solving a proportion of the form $x/a = b/c$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 alge175 Word problem on direct variation
 alge602 Writing a one-step variable expression for a real-world situation
 alge016 Translating a sentence into a one-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides

Graphs, Functions and Systems of Equations

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 fun001 Table for a linear function
 alge197 Graphing a line given its x- and y-intercepts
 alge198 Graphing a vertical or horizontal line
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge637 Determining the slope of a line given its graph
 alge263 Interpreting the graphs of two functions
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge191 Midpoint of a line segment in the plane
 alge132 Distance between two points in the plane: Exact answers
 alge726 Using the distance formula with midpoints
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge725 Graphically solving a system of linear equations
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge722 Simple system of equations with three unknowns
 alge807 Finding the next terms of a sequence with whole numbers
 alge728 Finding patterns in geometry
 alge727 Checking if a formula describes a pattern
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 set004 Set builder and interval notation

fun016 Domain and range from ordered pairs
 fun024 Domain and range from the graph of a continuous function
 fun010 Vertical line test
 alge702 Classifying the graph of a function
 alge177 Finding a final amount in a word problem on exponential growth or decay

Exponents, Polynomials and Quadratics

arith047 Evaluating expressions with exponents: Problem type 1
 alge026 Quotient of expressions involving exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge028 Product rule with negative exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge004 Evaluating a quadratic expression: Integers
 alge663 Combining like terms: Advanced
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge033 Multiplying binomials with leading coefficients of 1
 alge032 Squaring a binomial: Univariate
 alge705 Factoring a quadratic with leading coefficient 1
 alge040 Factoring a quadratic with leading coefficient greater than 1
 alge290 Factoring a difference of squares in one variable: Basic
 alge681 Solving an equation written in factored form
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge095 Applying the quadratic formula: Exact answers
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge723 How the leading coefficient affects the shape of a parabola
 alge252 Graphing a parabola of the form $y = ax^2$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 alge185 Writing an equation for a function after a vertical translation
 alge262 Graphing a cubic function of the form $y = ax^3$

Perimeter, Area and Volume

geom300 Perimeter of a square or a rectangle
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom142 Word problem involving the area between two rectangles
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom344 Area involving rectangles and triangles
 geom213 Area of a regular polygon
 geom832 Area of quadrilaterals in the coordinate plane
 alge724 Finding an area in terms of variables

geom218 Finding the radius or the diameter of a circle given its circumference
 geom802 Circumference and area of a circle
 geom301 Perimeter involving rectangles and circles
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom805 Arc length and area of a sector of a circle
 geom219 Nets of solids
 geom861 Nets of solids: Advanced
 geom865 Measuring the net of a solid to find surface area or volume
 geom348 Vertices, edges, and faces of a solid
 geom816 Side views of a solid made of cubes
 geom031 Surface area of a cube or a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom830 Counting the cubes in a solid made of cubes
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom035 Volume of a cylinder
 geom841 Volume of a sphere
 geom033 Volume of a pyramid
 geom086 Volume of a cone: Exact answers in terms of pi
 geom092 Word problem involving the rate of filling or emptying a cylinder

Geometry

geom358 Identifying parallel and perpendicular lines
 geom521 Segment addition and midpoints
 geom039 Finding supplementary and complementary angles
 geom304 Identifying corresponding and alternate angles
 geom305 Identifying supplementary and vertical angles
 geom530 Solving equations involving vertical angles
 geom503 Solving equations involving angles and two pairs of parallel lines
 geom850 Angle addition with relationships between angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom852 The sum of interior angle measures in a convex polygon
 geom814 Angle measure in a circle graph
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom044 Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom860 Special right triangles: Decimal answers
 geom068 Computing an area using the Pythagorean Theorem
 geom854 Relationship between angle measures and side lengths in a triangle
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom310 Properties of quadrilaterals
 geom528 Finding measures involving diagonals of parallelograms
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom819 Finding coordinates of vertices of polygons
 geom359 Identifying congruent shapes on a grid

geom863 Congruence in the coordinate plane
geom360 Identifying similar or congruent shapes on a grid
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
geom510 Triangles and parallel lines
geom507 Right triangles and geometric mean
geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
geom847 Similar solids: Problem type 2
geom133 Ratio of volumes
geom330 Translating a polygon
geom357 Identifying transformations
geom331 Using a translated point to find coordinates of other translated points
geom332 Reflecting a polygon over a vertical or horizontal line
geom333 Finding the coordinates of three points reflected over an axis
geom334 Drawing lines of symmetry
geom335 Rotating a figure about the origin
geom336 Dilating a figure
geom815 Finding an angle of rotation

Probability and Statistics

mstat044 Interpreting a double bar graph
mstat007 Interpreting a line graph
mstat051 Choosing a graph to fit a narrative: Advanced
stat804 Interpreting a circle graph or pie chart
mstat043 Interpreting a Venn diagram of 3 sets
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat006 Constructing a box-and-whisker plot
mstat052 Identifying independent and dependent variables from equations or real-world situations
mstat003 Mode of a data set
mstat028 Mean and median of a data set
mstat050 Choosing a measure to describe data
stat803 Finding the value for a new score that will yield a given mean
mstat029 How changing a value affects the mean and median
stat802 Rejecting unreasonable claims based on average statistics
stat805 Making a reasonable inference based on proportion statistics
mstat025 Finding if a question can be answered by the data
mstat040 Introduction to the counting principle
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
stat106 Outcomes and event probability
stat112 Probabilities involving two dice
mstat011 Area as probability
mstat012 Probability of independent events
mstat013 Probability of dependent events
mstat046 Experimental and theoretical probability
mstat047 Introduction to expectation

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Whole Numbers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith001 Addition without carry
arith635 Adding a 2-digit number and a 1-digit number with carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith653 Fact families for addition and subtraction
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith639 Using multiplication to find the number of squares
arith679 Multiplication by 10, 100, and 1000
arith003 Multiplication without carry
arith004 Multiplication with carry
arith632 Multiplication with trailing zeros: Problem type 1
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith654 Fact families for multiplication and division
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith052 Division without carry
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product

arith678 Estimating a quotient
 arith692 Writing expressions using exponents
 arith233 Introduction to exponents
 arith683 Power of 10: Positive exponent
 arith645 Introduction to parentheses
 arith865 Comparing numerical expressions with parentheses
 arith681 Introduction to order of operations
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith713 Order of operations with whole numbers and exponents: Advanced
 arith646 Even and odd numbers
 arith647 Divisibility rules for 2, 5, and 10
 arith648 Divisibility rules for 3 and 9
 arith056 Factors
 arith034 Prime numbers
 arith035 Prime factorization
 arith033 Greatest common factor of 2 numbers
 arith516 Greatest common factor of 3 numbers
 arith409 Introduction to the distributive property
 arith657 Understanding the distributive property
 arith410 Introduction to factoring with numbers
 arith411 Factoring a sum or difference of whole numbers
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers
 arith418 Word problem involving the least common multiple of 2 numbers
 arith240 Word problem with common multiples
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge649 Evaluating a formula
 alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge016 Translating a sentence into a one-step equation
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid

Decimals

arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals

arith221 Rounding decimals
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith668 Addition with money
 arith669 Subtraction with money
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith135 Word problem with multiplication of a decimal and a whole number
 arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
 arith019 Division of a decimal by a 2-digit decimal
 arith083 Division of a decimal by a power of ten
 arith742 Division of a decimal by a power of 0.1
 arith745 Decimal division with rounding
 arith136 Word problem with division of a decimal and a whole number
 arith138 Word problem with division of two decimals
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith103 Average of two numbers
 arith753 Squaring decimal bases: Products greater than 0.1
 arith741 Exponents and decimals: Products less than 0.1
 arith720 Order of operations with decimals: Problem type 1
 arith746 Order of operations with decimals: Problem type 2
 arith747 Order of operations with decimals: Problem type 3
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2

arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith127 Writing a decimal and a fraction for a shaded region
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith733 Using a calculator to convert a fraction to a rounded decimal
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith732 Converting a fraction or mixed number to a rounded decimal
arith609 Ordering fractions and decimals
arith717 Converting a decimal to a proper fraction without simplifying: Basic
arith719 Converting a decimal to a proper fraction without simplifying: Advanced
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
arith513 Identifying rational decimal numbers
arith821 Exponents and fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3

arith695 Complex fraction without variables: Problem type 1
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge281 Function tables with one-step rules
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer

mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 arith918 Comparing discounts
 arith914 Calculations involving paying for college
 arith916 Computing percentages for categories of a budget
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score

Integers and Rational Numbers

alge286 Plotting integers on a number line
 mstat038 Reading the temperature from a thermometer
 arith691 Ordering integers
 arith415 Using a number line to compare integers
 arith699 Writing a signed number for a real-world situation
 arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
 arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
 arith416 Comparing signed numbers relating to a real-world situation
 arith402 Plotting opposite integers on a number line
 arith403 Finding opposites of integers
 arith071 Absolute value of a number
 arith412 Finding all numbers with a given absolute value
 arith605 Plotting rational numbers on a number line
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith431 Identifying a sum as a point located a given distance from another point
 arith430 Identifying relative change when combining two quantities
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith755 Addition and subtraction with 4 or 5 integers
 arith440 Operations with absolute value: Problem type 1
 arith104 Operations with absolute value: Problem type 2
 alge694 Computing the distance between two integers on a number line
 arith433 Computing and understanding distances between integers on a number line
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith952 Word problem with multiplication or division of integers
 arith702 Exponents and integers: Problem type 1
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith750 Signed decimal multiplication
 arith751 Signed decimal division
 alge660 Identifying equivalent signed fractions
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 geom525 Computing distances between decimals on the number line
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge001 Identifying numbers as integers or non-integers
 alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients

arith655 Introduction to properties of addition
alge187 Properties of addition
alge665 Combining like terms: Decimal coefficients
alge666 Combining like terms: Fractional coefficients
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge610 Distributive property: Fractional coefficients
alge605 Factoring a linear binomial
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
arith656 Introduction to properties of multiplication
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression

Equations and Inequalities

alge800 Additive property of equality with decimals
alge801 Additive property of equality with fractions and mixed numbers
alge010 Additive property of equality with integers
alge836 Additive property of equality with signed fractions
alge825 Multiplicative property of equality with decimals
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions
alge797 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge803 Using two steps to solve an equation with whole numbers
alge266 Additive property of equality with a negative coefficient
alge006 Solving a two-step equation with integers
alge920 Introduction to solving an equation with parentheses
alge837 Solving a multi-step equation given in fractional form
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge658 Introduction to solving a rational equation
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge671 Choosing stories that can be represented by given one-step equations
alge841 Translating a sentence into a multi-step equation
alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
alge618 Comparing arithmetic and algebraic solutions to a word problem
alge672 Choosing stories that can be represented by given two-step equations
alge014 Solving a word problem with two unknowns using a linear equation
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge015 Translating a sentence by using an inequality symbol
alge845 Translating a sentence into a one-step inequality
alge653 Introduction to identifying solutions to an inequality
alge748 Writing an inequality for a real-world situation
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge166 Graphing a compound inequality on the number line
alge652 Identifying solutions to a one-step linear inequality
alge848 Additive property of inequality with whole numbers
alge849 Additive property of inequality with integers
alge809 Multiplicative property of inequality with whole numbers
alge854 Multiplicative property of inequality with integers
alge636 Solving a two-step linear inequality with whole numbers
alge846 Translating a sentence into a multi-step inequality
alge621 Solving a word problem using a one-step linear inequality

alge623 Solving a word problem using a two-step linear inequality

Graphs and Functions

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 arith454 Making a table and plotting points given a unit rate
 alge283 Graphing whole number functions
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun001 Table for a linear function
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 mstat007 Interpreting a line graph
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge263 Interpreting the graphs of two functions
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 alge907 Finding the next terms of a geometric sequence with signed numbers

alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom519 Identifying and naming congruent parts of congruent triangles
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon
 arith016 Square root of a perfect square
 alge413 Finding all square roots of a number
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom603 Identifying side lengths that give right triangles

Transformations

geom357 Identifying transformations
 geom355 Introduction to translations

geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom356 Introduction to reflections
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom832 Area of quadrilaterals in the coordinate plane
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios

geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom311 Volume of a rectangular prism
 geom354 Volume of a rectangular prism made of unit cubes
 geom518 Volume of a solid made of cubes with unit fraction edge lengths
 geom535 Volume of a rectangular prism with fractional edge lengths
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom035 Volume of a cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data

mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events

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Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property

arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom311 Volume of a rectangular prism
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge010 Additive property of equality with integers
alge008 Multiplicative property of equality with whole numbers
alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
alge660 Identifying equivalent signed fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith814 Signed fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
alge432 Introduction to adding fractions with variables and common denominators
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith605 Plotting rational numbers on a number line
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division

arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 alge790 Evaluating expressions with exponents of zero
 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

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arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 geom525 Computing distances between decimals on the number line
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith750 Signed decimal multiplication
 arith135 Word problem with multiplication of a decimal and a whole number

arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith751 Signed decimal division
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith733 Using a calculator to convert a fraction to a rounded decimal
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith732 Converting a fraction or mixed number to a rounded decimal
arith609 Ordering fractions and decimals
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith748 Addition or subtraction with a decimal and a mixed number
arith749 Multiplication with a decimal and a fraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge800 Additive property of equality with decimals
alge825 Multiplicative property of equality with decimals

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arith823 Writing ratios using different notations
arith663 Writing ratios for real-world situations
arith450 Identifying statements that describe a ratio
arith824 Simplifying a ratio of whole numbers: Problem type 1
arith825 Simplifying a ratio of decimals
arith827 Finding a unit price
arith455 Using tables to compare ratios
arith828 Computing unit prices to find the better buy
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
arith505 Word problem on unit rates associated with ratios of fractions
arith506 Word problem on unit rates associated with ratios of mixed numbers
arith064 Solving a word problem on proportions using a unit rate
alge823 Solving a one-step word problem using the formula $d = rt$
arith452 Finding missing values in a table of equivalent ratios
arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
arith504 Writing an equation to represent a proportional relationship
alge819 Solving a proportion of the form $x/a=b/c$: Basic

alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
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 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
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arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form

arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith904 Finding benchmark fractions and percentages for a figure
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage
arith842 Converting a fraction to a percentage in a real-world situation
arith840 Finding a percentage of a whole number
arith030 Finding a percentage of a whole number without a calculator: Basic
arith844 Finding a percentage of a whole number without a calculator: Advanced
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith845 Finding a percentage of a total amount: Real-world situations
arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
arith857 Estimating a tip without a calculator
arith069 Writing a ratio as a percentage without a calculator
arith850 Finding the rate of a tax or commission
arith849 Finding the total amount given the percentage of a partial amount
stat805 Making a reasonable inference based on proportion statistics
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith232 Finding simple interest without a calculator
arith853 Introduction to compound interest
arith915 Calculating income tax
arith918 Comparing discounts
arith909 Examining a savings plan for college
arith914 Calculations involving paying for college
arith920 Comparing total costs for attending different colleges
arith922 Distinguishing between fixed and variable expenses
arith916 Computing percentages for categories of a budget
arith919 Computations involving cost of living and hourly wage
arith921 Comparing annual salaries of different occupations
arith911 Calculations involving purchases with debit and credit cards
arith950 Comparing costs of checking accounts
arith951 Balancing a check register
arith912 Reading a credit report
arith913 Understanding the impact of a credit score
arith917 Computing a person's net worth
arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
arith910 Calculating and comparing simple interest and compound interest

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alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
arith655 Introduction to properties of addition
alge187 Properties of addition

alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge658 Introduction to solving a rational equation
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge016 Translating a sentence into a one-step equation
 alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations

alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 alge796 Solving a distance, rate, time problem using a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality

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alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules

fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge924 Finding x- and y-intercepts of a line given the equation: Basic
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x- and y-intercepts
 alge881 Graphing a line by first finding its x- and y-intercepts
 alge874 Identifying linear functions given ordered pairs
 geom358 Identifying parallel and perpendicular lines
 mstat007 Interpreting a line graph
 arith454 Making a table and plotting points given a unit rate
 arith501 Identifying proportional relationships in graphs: Basic
 arith502 Identifying proportional relationships in graphs: Advanced
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
 alge699 Comparing proportional relationships given in different forms
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 alge625 Identifying linear equations: Basic
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable

equation

alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition

alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base
 alge961 Introduction to the product rule with negative exponents
 alge689 Introduction to the quotient rule with negative exponents: Whole number base
 alge755 Quotient rule with negative exponents: Problem type 1
 alge691 Introduction to the power of a power rule with negative exponents: Whole number base
 alge025 Power of a power rule with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot025 Estimating numbers using scientific notation
 scinot020 Choosing metric units and converting to the base unit in scientific notation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
 scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic

scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
scinot017 Estimating the sum or difference of two numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge032 Squaring a binomial: Univariate
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge045 Finding the roots of a quadratic equation with leading coefficient 1
arith016 Square root of a perfect square
arith601 Square root of a rational perfect square
alge413 Finding all square roots of a number
arith760 Square roots of perfect squares with signs
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge567 Using numerical methods to approximate a square root to the nearest tenth
alge568 Using numerical methods to approximate a square root to the nearest hundredth
arith515 Approximating the location of irrational numbers on a number line
arith712 Ordering real numbers
arith514 Converting a repeating decimal to a fraction
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
alge080 Simplifying a radical expression with an even exponent
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
alge962 Solving an equation of the form $x^2 = a$ using the square root property
geom564 Finding side lengths of squares given an area and a perimeter
alge400 Introduction to solving a radical equation
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge542 Word problem involving radical equations: Basic
arith094 Cube root of an integer
alge698 Solving an equation of the form $x^3 = a$ using integers
alge093 Solving an equation using the odd-root property: Problem type 1
geom565 Finding the side length of a cube given its volume
alge560 Rational exponents: Unit fraction exponents and whole number bases
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge407 Introduction to the Pythagorean Theorem
geom044 Pythagorean Theorem
alge408 Word problem involving the Pythagorean Theorem
geom862 Using the Pythagorean Theorem repeatedly

alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram

- geom870 Sum of the angle measures of a quadrilateral
- geom852 The sum of interior angle measures in a convex polygon

Transformations

- geom519 Identifying and naming congruent parts of congruent triangles
- geom520 Identifying and naming congruent triangles
- geom583 Finding angle measures of a triangle given two angles of a similar triangle
- geom585 Finding angle measures and side ratios to determine if two triangles are similar
- geom357 Identifying transformations
- geom596 Translating a point and giving its coordinates: One step
- geom909 Translating a point and giving its coordinates: Two steps
- geom597 Properties of translated figures
- geom598 Determining if figures are related by a translation
- geom330 Translating a polygon
- geom331 Using a translated point to find coordinates of other translated points
- arith408 Reflecting a point across an axis
- geom533 Reflecting a point across both coordinate axes
- geom590 Reflecting a point across an axis and giving its coordinates
- arith407 Finding the coordinates of a point reflected across an axis
- geom560 Finding the coordinates of a point reflected across both axes
- geom534 Reflecting a polygon across the x-axis or y-axis
- geom591 Properties of reflected figures
- geom592 Determining if figures are related by a reflection
- geom332 Reflecting a polygon over a vertical or horizontal line
- geom333 Finding the coordinates of three points reflected over an axis
- geom334 Drawing lines of symmetry
- geom602 Finding the coordinates of a point reflected across an axis and translated
- geom815 Finding an angle of rotation
- geom624 Identifying rotational symmetry and angles of rotation
- geom593 Rotating a point and giving its coordinates
- geom594 Properties of rotated figures
- geom595 Determining if figures are related by a rotation
- geom335 Rotating a figure about the origin
- geom580 Determining if figures are congruent and related by a transformation
- geom581 Determining if figures are congruent and related by a sequence of transformations
- geom606 Dilating a segment and giving the coordinates of its endpoints
- geom607 The effect of dilation on side length
- geom608 Determining if figures are related by a dilation
- geom636 The effect of dilation on area
- geom336 Dilating a figure
- geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

- geom618 Perimeter of a polygon involving mixed numbers and fractions
- geom078 Sides of polygons having the same perimeter
- geom221 Finding the missing length in a figure
- geom353 Perimeter of a piecewise rectangular figure
- alge615 Writing algebraic expressions for the perimeter of a figure
- geom817 Finding a side length given the perimeter and side lengths with variables
- geom217 Finding the side length of a rectangle given its perimeter or area
- geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
- geom620 Area of a rectangle involving fractions
- geom619 Area of a rectangle involving mixed numbers and fractions
- geom350 Distinguishing between the area and perimeter of a rectangle
- geom351 Areas of rectangles with the same perimeter
- geom869 Estimates and exact answers

alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom143 Finding the perimeter or area of a rectangle given one of these values
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom344 Area involving rectangles and triangles
alge724 Finding an area in terms of variables
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom537 Finding the perimeter or area of a rectangle in the coordinate plane
geom832 Area of quadrilaterals in the coordinate plane
geom603 Identifying side lengths that give right triangles
geom589 Demonstrating the converse of the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom347 Introduction to a circle: Diameter, radius, and chord
geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom126 Area of a sector of a circle: Exact answer in terms of π
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of π
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom841 Volume of a sphere
geom574 Word problem involving the volume of a sphere
geom133 Ratio of volumes
geom219 Nets of solids
geom031 Surface area of a cube or a rectangular prism

geom632 Surface area of a rectangular prism made of unit cubes
geom555 Distinguishing between surface area and volume
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom578 Word problem involving the surface area of a cylinder
geom842 Surface area of a sphere
geom338 Surface area involving prisms or cylinders
geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
mstat080 Choosing an appropriate method for gathering data: Problem type 1
mstat081 Choosing an appropriate method for gathering data: Problem type 2
mstat056 Interpreting a tally table
mstat097 Constructing a two-way frequency table: Basic
mstat098 Constructing a two-way frequency table: Advanced
mstat049 Computing a percentage from a table of values
mstat087 Making an inference using a two-way frequency table
stat020 Calculating relative frequencies in a contingency table
mstat025 Finding if a question can be answered by the data
mstat037 Constructing a line plot
mstat005 Constructing a bar graph for non-numerical data
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat057 Interpreting a pictograph table
mstat031 Interpreting a stem-and-leaf plot
geom814 Angle measure in a circle graph
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat093 Classifying linear and nonlinear relationships from scatter plots
mstat071 Linear relationship and the correlation coefficient
mstat096 Identifying outliers and clustering in scatter plots
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat075 Understanding the mean graphically: Two bars
mstat076 Understanding the mean graphically: Four or more bars
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data

mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat090 Comparing sample means
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat084 Assessing the degree of overlap of two distributions
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

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Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith004 Multiplication with carry
 arith615 Introduction to multiplication of large numbers
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith014 Multiplication of large numbers
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2

arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2

arith431 Identifying a sum as a point located a given distance from another point
 arith430 Identifying relative change when combining two quantities
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith755 Addition and subtraction with 4 or 5 integers
 arith440 Operations with absolute value: Problem type 1
 arith104 Operations with absolute value: Problem type 2
 alge694 Computing the distance between two integers on a number line
 arith433 Computing and understanding distances between integers on a number line
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith952 Word problem with multiplication or division of integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge649 Evaluating a formula
 alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid
 geom311 Volume of a rectangular prism
 alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge010 Additive property of equality with integers
 alge008 Multiplicative property of equality with whole numbers
 alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 alge660 Identifying equivalent signed fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2

arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith814 Signed fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
alge432 Introduction to adding fractions with variables and common denominators
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith605 Plotting rational numbers on a number line
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith821 Exponents and fractions
alge790 Evaluating expressions with exponents of zero
arith704 Exponents and signed fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3
arith695 Complex fraction without variables: Problem type 1
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge801 Additive property of equality with fractions and mixed numbers
alge836 Additive property of equality with signed fractions
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions
alge012 Multiplicative property of equality with signed fractions

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith714 Writing a decimal number less than 1 given its name
arith715 Writing a decimal number greater than 1 given its name
arith716 Writing a decimal number given its name: Advanced
arith829 Reading decimal position on a number line: Tenths
arith830 Reading decimal position on a number line: Hundredths
arith831 Understanding decimal position on a number line using zoom: Hundredths
arith832 Understanding decimal position on a number line using zoom: Thousandths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith221 Rounding decimals
arith717 Converting a decimal to a proper fraction without simplifying: Basic
arith719 Converting a decimal to a proper fraction without simplifying: Advanced
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
geom525 Computing distances between decimals on the number line
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith750 Signed decimal multiplication
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith751 Signed decimal division
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic

arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 arith753 Squaring decimal bases: Products greater than 0.1
 arith741 Exponents and decimals: Products less than 0.1
 arith720 Order of operations with decimals: Problem type 1
 arith746 Order of operations with decimals: Problem type 2
 arith747 Order of operations with decimals: Problem type 3
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals

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arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions
 arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches

mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph

arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 arith915 Calculating income tax
 arith918 Comparing discounts
 arith909 Examining a savings plan for college
 arith914 Calculations involving paying for college
 arith920 Comparing total costs for attending different colleges
 arith922 Distinguishing between fixed and variable expenses
 arith916 Computing percentages for categories of a budget
 arith919 Computations involving cost of living and hourly wage
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score
 arith917 Computing a person's net worth
 arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
 arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
 arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
 arith910 Calculating and comparing simple interest and compound interest

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 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression

alge920 Introduction to solving an equation with parentheses
alge837 Solving a multi-step equation given in fractional form
alge986 Identifying properties used to solve a linear equation
alge824 Solving a two-step equation with signed decimals
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
alge208 Solving a two-step equation with signed fractions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge742 Solving equations with zero, one, or infinitely many solutions
alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge603 Introduction to solving an absolute value equation
alge864 Solving an absolute value equation: Problem type 1
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge016 Translating a sentence into a one-step equation
alge671 Choosing stories that can be represented by given one-step equations
alge841 Translating a sentence into a multi-step equation
alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
alge618 Comparing arithmetic and algebraic solutions to a word problem
alge672 Choosing stories that can be represented by given two-step equations
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
alge014 Solving a word problem with two unknowns using a linear equation
alge673 Writing an equation to represent a real-world problem: Variable on both sides
alge674 Writing and solving a real-world problem given an equation with the variable on both sides
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
alge796 Solving a distance, rate, time problem using a linear equation
alge015 Translating a sentence by using an inequality symbol
alge845 Translating a sentence into a one-step inequality
alge653 Introduction to identifying solutions to an inequality
alge748 Writing an inequality for a real-world situation
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge847 Writing a compound inequality given a graph on the number line

alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality

Graphing, Functions, and Sequences

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge874 Identifying linear functions given ordered pairs
 geom358 Identifying parallel and perpendicular lines
 mstat007 Interpreting a line graph
 arith454 Making a table and plotting points given a unit rate
 arith501 Identifying proportional relationships in graphs: Basic
 arith502 Identifying proportional relationships in graphs: Advanced
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation

alge699 Comparing proportional relationships given in different forms
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 alge625 Identifying linear equations: Basic
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function no-

tation

alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents

alge311 Product rule with positive exponents: Univariate
alge030 Product rule with positive exponents: Multivariate
alge690 Introduction to the power of a power rule with positive exponents: Whole number base
alge826 Understanding the power rules of exponents
alge306 Introduction to the power of a power rule of exponents
alge305 Introduction to the power of a product rule of exponents
alge307 Power rules with positive exponents: Multivariate products
alge308 Power rules with positive exponents: Multivariate quotients
alge451 Simplifying a ratio of multivariate monomials: Basic
alge688 Introduction to the quotient rule with positive exponents: Whole number base
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
arith029 Ordering numbers with positive exponents
arith684 Power of 10: Negative exponent
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
arith024 Ordering numbers with negative exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge687 Introduction to the product rule with negative exponents: Whole number base
alge961 Introduction to the product rule with negative exponents
alge689 Introduction to the quotient rule with negative exponents: Whole number base
alge755 Quotient rule with negative exponents: Problem type 1
alge691 Introduction to the power of a power rule with negative exponents: Whole number base
alge025 Power of a power rule with negative exponents
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot025 Estimating numbers using scientific notation
scinot020 Choosing metric units and converting to the base unit in scientific notation
scinot021 Expressing calculator notation as scientific notation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
scinot017 Estimating the sum or difference of two numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge032 Squaring a binomial: Univariate
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1

alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 arith016 Square root of a perfect square
 arith601 Square root of a rational perfect square
 alge413 Finding all square roots of a number
 arith760 Square roots of perfect squares with signs
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 alge567 Using numerical methods to approximate a square root to the nearest tenth
 alge568 Using numerical methods to approximate a square root to the nearest hundredth
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 alge001 Identifying numbers as integers or non-integers
 arith513 Identifying rational decimal numbers
 arith514 Converting a repeating decimal to a fraction
 arith432 Identifying true statements about rational and irrational numbers
 alge002 Identifying numbers as rational or irrational
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal

geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis

geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom832 Area of quadrilaterals in the coordinate plane
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem

geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom126 Area of a sector of a circle: Exact answer in terms of π
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom354 Volume of a rectangular prism made of unit cubes
 geom518 Volume of a solid made of cubes with unit fraction edge lengths
 geom535 Volume of a rectangular prism with fractional edge lengths
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom035 Volume of a cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of π
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom133 Ratio of volumes
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of π
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions

mstat080 Choosing an appropriate method for gathering data: Problem type 1
mstat081 Choosing an appropriate method for gathering data: Problem type 2
mstat056 Interpreting a tally table
mstat097 Constructing a two-way frequency table: Basic
mstat098 Constructing a two-way frequency table: Advanced
mstat049 Computing a percentage from a table of values
mstat087 Making an inference using a two-way frequency table
stat020 Calculating relative frequencies in a contingency table
mstat025 Finding if a question can be answered by the data
mstat037 Constructing a line plot
mstat005 Constructing a bar graph for non-numerical data
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat057 Interpreting a pictograph table
mstat031 Interpreting a stem-and-leaf plot
geom814 Angle measure in a circle graph
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat093 Classifying linear and nonlinear relationships from scatter plots
mstat071 Linear relationship and the correlation coefficient
mstat096 Identifying outliers and clustering in scatter plots
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat075 Understanding the mean graphically: Two bars
mstat076 Understanding the mean graphically: Four or more bars
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
mstat078 Comparing measures of center and variation
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat090 Comparing sample means
mstat082 Computing mean absolute deviation from a list of numerical values
mstat083 Computing mean absolute deviation from a bar graph
mstat084 Assessing the degree of overlap of two distributions
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
mstat054 Classifying likelihood

mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

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Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith001 Addition without carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith636 Subtracting a 1-digit number from a 2-digit number
 arith007 Subtraction without borrowing
 arith006 Subtraction with borrowing
 arith637 Subtraction and regrouping with zeros
 arith682 Subtraction with multiple regrouping steps
 arith613 Word problem with addition or subtraction of whole numbers
 arith008 One-digit multiplication
 arith679 Multiplication by 10, 100, and 1000
 arith003 Multiplication without carry
 arith004 Multiplication with carry
 arith615 Introduction to multiplication of large numbers
 arith014 Multiplication of large numbers
 arith075 Division facts
 arith052 Division without carry
 arith005 Division with carry
 arith616 Quotient and remainder: Problem type 1
 arith617 Quotient and remainder: Problem type 2
 arith631 Quotient and remainder: Problem type 3
 arith023 Word problem with division of whole numbers and rounding
 arith614 Word problem with multiplication or division of whole numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith651 Introduction to inequalities
 arith077 Ordering large numbers
 arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith677 Estimating a product
 arith678 Estimating a quotient

arith645 Introduction to parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith070 Least common multiple of 2 numbers
arith240 Word problem with common multiples
mstat038 Reading the temperature from a thermometer
alge286 Plotting integers on a number line
arith071 Absolute value of a number
arith104 Operations with absolute value: Problem type 2
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith231 Integer multiplication and division
arith118 Order of operations with integers

Rational Numbers

arith623 Introduction to fractions
arith663 Writing ratios for real-world situations
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith605 Plotting rational numbers on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith609 Ordering fractions and decimals
arith618 Addition or subtraction of fractions with the same denominator
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith088 The reciprocal of a number
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith022 Fraction division
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry

arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith085 Addition or subtraction of mixed numbers with different denominators
 arith020 Mixed number multiplication: Problem type 1
 arith076 Mixed number multiplication: Problem type 2
 arith068 Mixed number division
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith671 Converting a fraction with a denominator of 10, 100, or 1000 to a decimal
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith672 Converting a decimal to a mixed number
 arith223 Converting a mixed number to a decimal
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith625 Subtraction of aligned decimals
 arith626 Word problem with one decimal operation: Problem type 1
 arith627 Word problem with one decimal operation: Problem type 2
 arith131 Estimating a decimal sum or difference
 arith082 Multiplication of a decimal by a power of ten
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith045 Word problem with powers of ten
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith083 Division of a decimal by a power of ten
 arith081 Division of a decimal by a whole number
 arith019 Division of a decimal by a 2-digit decimal
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith105 Signed fraction multiplication: Advanced
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 geom525 Computing distances between decimals on the number line

Measurement, Proportion, Percents, and Probability

mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit009 U.S. Customary area unit conversion with whole number values
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 unit012 Time unit conversion with whole number values
 time006 Adding time
 time007 Elapsed time
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge218 Solving a word problem involving rates and time conversion

alge272 Solving a proportion of the form $x/a = b/c$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith674 Finding the percentage of a grid that is shaded
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith069 Writing a ratio as a percentage without a calculator
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith031 Finding the original price given the sale price and percent discount
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 mstat049 Computing a percentage from a table of values
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 stat106 Outcomes and event probability
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat011 Area as probability
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 stat112 Probabilities involving two dice

Variable Expressions and Equations

arith655 Introduction to properties of addition
 arith656 Introduction to properties of multiplication
 arith657 Understanding the distributive property
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge607 Combining like terms: Integer coefficients
 alge663 Combining like terms: Advanced
 alge293 Combining like terms in a quadratic expression
 alge731 Evaluating an algebraic expression: Whole numbers with two operations
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge733 Writing a one-step expression for a real-world situation
 alge602 Writing a one-step variable expression for a real-world situation
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge801 Additive property of equality with fractions and mixed numbers
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge008 Multiplicative property of equality with whole numbers
 alge012 Multiplicative property of equality with signed fractions
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge810 Introduction to algebraic symbol manipulation
 alge016 Translating a sentence into a one-step equation
 alge730 Writing a multi-step equation for a real-world situation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge014 Solving a word problem with two unknowns using a linear equation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides

alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge015 Translating a sentence by using an inequality symbol
 alge019 Solving a linear inequality: Problem type 1
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge017 Graphing a linear inequality on the number line
 arith233 Introduction to exponents
 arith683 Power of 10: Positive exponent
 arith684 Power of 10: Negative exponent
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 arith047 Evaluating expressions with exponents: Problem type 1
 arith049 Evaluating expressions with exponents: Problem type 2
 arith600 Order of operations with integers and exponents
 arith016 Square root of a perfect square
 arith602 Estimating a square root
 arith601 Square root of a rational perfect square
 arith093 Simplifying the square root of a whole number less than 100
 arith094 Cube root of an integer
 alge024 Introduction to the product rule of exponents
 arith029 Ordering numbers with positive exponents
 alge030 Product rule with positive exponents: Multivariate
 alge026 Quotient of expressions involving exponents
 alge027 Power rules with positive exponents
 alge004 Evaluating a quadratic expression: Integers
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge033 Multiplying binomials with leading coefficients of 1
 alge055 Least common multiple of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge705 Factoring a quadratic with leading coefficient 1
 alge040 Factoring a quadratic with leading coefficient greater than 1
 alge624 Factoring a difference of squares
 alge681 Solving an equation written in factored form
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic

Functions and Graphs

mstat005 Constructing a bar graph for non-numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat007 Interpreting a line graph
 mstat003 Mode of a data set
 mstat028 Mean and median of a data set
 stat803 Finding the value for a new score that will yield a given mean
 mstat029 How changing a value affects the mean and median
 mstat025 Finding if a question can be answered by the data
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 alge282 Function tables with two-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge807 Finding the next terms of a sequence with whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations

alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge197 Graphing a line given its x- and y-intercepts
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge263 Interpreting the graphs of two functions
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 alge252 Graphing a parabola of the form $y = ax^2$

Geometry

geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom304 Identifying corresponding and alternate angles
 geom305 Identifying supplementary and vertical angles
 geom530 Solving equations involving vertical angles
 geom531 Solving equations involving angles and a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom520 Identifying and naming congruent triangles
 geom801 Area of a triangle
 geom001 Finding an angle measure of a triangle given two angles
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom044 Pythagorean Theorem
 geom854 Relationship between angle measures and side lengths in a triangle
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 geom361 Naming polygons
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom300 Perimeter of a square or a rectangle
 geom339 Perimeter of a polygon
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles

geom344 Area involving rectangles and triangles
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom832 Area of quadrilaterals in the coordinate plane
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom802 Circumference and area of a circle
 geom036 Word problem involving the area between two concentric circles
 geom302 Area involving rectangles and circles
 geom214 Area involving inscribed figures
 geom868 Classifying solids
 geom354 Volume of a rectangular prism made of unit cubes
 geom311 Volume of a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom033 Volume of a pyramid
 geom035 Volume of a cylinder
 geom086 Volume of a cone: Exact answers in terms of π
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom348 Vertices, edges, and faces of a solid
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids

B.72 H.S. Prep. for Statistics

Numbers

arith200 Integer addition: Problem type 1
 arith688 Integer subtraction: Problem type 1
 arith231 Integer multiplication and division
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith118 Order of operations with integers
 arith220 Decimal place value: Hundreds to ten thousandths
 arith221 Rounding decimals
 arith082 Multiplication of a decimal by a power of ten
 arith083 Division of a decimal by a power of ten
 arith117 Signed decimal addition and subtraction
 arith226 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith686 Writing a ratio as a percentage
 stat849 Computing a percentage from a table of values
 arith067 Simplifying a fraction
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith053 Fraction multiplication
 arith022 Fraction division

Algebraic Expressions

arith047 Evaluating expressions with exponents: Problem type 1
arith600 Order of operations with integers and exponents
alge731 Evaluating an algebraic expression: Whole numbers with two operations
alge004 Evaluating a quadratic expression: Integers
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge606 Distributive property: Whole number coefficients
alge607 Combining like terms: Integer coefficients
stat026 Introduction to summation notation
stat022 Summation of indexed data
alge024 Introduction to the product rule of exponents
alge027 Power rules with positive exponents

Linear Equations

alge016 Translating a sentence into a one-step equation
alge292 Translating sentences into two-variable equations
alge810 Introduction to algebraic symbol manipulation
alge006 Solving a two-step equation with integers
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution

Lines in the Coordinate Plane

alge064 Reading a point in the coordinate plane
alge067 Plotting a point in the coordinate plane
alge256 Y-intercept of a line
alge257 X- and y-intercepts of a line given the equation in standard form
alge197 Graphing a line given its x- and y-intercepts
alge194 Graphing a line given its equation in slope-intercept form
alge684 Finding slope given the graph of a line on a grid
alge070 Writing an equation of a line given the y-intercept and another point
alge196 Graphing a line through a given point with a given slope

Descriptive Statistics

stat777 Classification of variables and levels of measurement
stat142 Discrete versus continuous variables
stat807 Interpreting line graphs
stat227 Interpreting bar graphs
stat844 Double bar charts
stat904 Interpreting pie charts
stat901 Computations from pie charts
stat831 Interpreting a stem-and-leaf display
stat702 Histograms for grouped data
stat717 Interpreting relative frequency histograms
stat703 Frequency polygons for grouped data
stat718 Cumulative distributions and ogives
stat706 Mean, median, and mode: Computations
stat798 Mean, median, and mode: Comparisons
stat007 Weighted mean: Tabular data
stat902 Rejecting unreasonable claims based on average statistics
stat905 Making reasonable inferences based on proportion statistics
stat009 Percentiles
stat021 Population standard deviation
stat011 Sample standard deviation

Counting and Probability

stat782 Factorial expressions
 stat788 Combinations
 stat789 Permutations
 stat826 Introduction to probability of an event
 stat810 Probability of an event
 stat846 Experimental and theoretical probability
 stat106 Outcomes and event probability
 stat226 Die rolling
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat114 Probability of intersection or union: Word problems
 stat116 Conditional probability: Basic
 stat109 Intersection and conditional probability

B.73 AP Statistics (Quantitative)**Mathematical Readiness**

arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith220 Decimal place value: Hundreds to ten thousandths
 arith221 Rounding decimals
 arith226 Converting between percentages and decimals
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith069 Writing a ratio as a percentage without a calculator
 arith090 Converting a percentage to a fraction in simplest form
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 stat022 Summation of indexed data
 alge006 Solving a two-step equation with integers
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge256 Y-intercept of a line
 alge257 X- and y-intercepts of a line given the equation in standard form
 alge070 Writing an equation of a line given the y-intercept and another point
 alge197 Graphing a line given its x- and y-intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge196 Graphing a line through a given point with a given slope

Descriptive Statistics

stat904 Interpreting pie charts
 stat901 Computations from pie charts
 stat844 Double bar charts
 stat702 Histograms for grouped data
 stat703 Frequency polygons for grouped data
 stat717 Interpreting relative frequency histograms
 stat718 Cumulative distributions and ogives
 stat164 Comparing means without calculation
 stat165 Comparing standard deviations without calculation

stat023 Box-and-whisker plots
 stat831 Interpreting a stem-and-leaf display
 stat827 Using back-to-back stem-and-leaf displays to compare data sets
 stat706 Mean, median, and mode: Computations
 stat902 Rejecting unreasonable claims based on average statistics
 stat007 Weighted mean: Tabular data
 stat719 Estimating the mean of grouped data
 stat009 Percentiles
 stat021 Population standard deviation
 stat011 Sample standard deviation
 stat729 Estimating the standard deviation of grouped data
 stat730 Chebyshev's theorem and the empirical rule
 stat798 Mean, median, and mode: Comparisons
 stat025 Transforming the mean and standard deviation of a data set
 stat905 Making reasonable inferences based on proportion statistics

Probability

stat782 Factorial expressions
 stat788 Combinations
 stat789 Permutations
 stat790 Permutations, combinations, and the multiplication principle for counting
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 stat119 Venn diagrams: Two events
 stat100 Venn diagrams: Three events
 stat101 Venn diagrams: Word problems
 stat106 Outcomes and event probability
 stat226 Die rolling
 stat114 Probability of intersection or union: Word problems
 stat115 Independent events: Basic
 stat120 Probability of union: Basic
 stat104 Mutually exclusive events: Two events
 stat102 Mutually exclusive events: Three events
 stat850 Probability of independent events
 stat105 Independent events: Two events
 stat103 Independent events: Three events
 stat113 The curious die
 stat020 Calculating relative frequencies in a contingency table
 stat116 Conditional probability: Basic
 stat851 Probability of dependent events
 stat109 Intersection and conditional probability
 stat107 Conditional probability: Mutually exclusive events
 stat108 Conditional probability: Independent events
 stat756 Tree diagrams for conditional probabilities
 stat110 Law of total probabilities
 stat111 Bayes' theorem

Random Variables

stat777 Classification of variables and levels of measurement
 stat142 Discrete versus continuous variables
 stat151 Discrete probability distribution: Basic
 stat143 Discrete probability distribution: Word problems
 stat149 Cumulative distribution function
 stat150 Expectation and variance of a random variable
 stat153 Rules for expectation and variance of random variables
 stat145 Marginal distributions of two discrete random variables

stat146 Joint distributions of dependent or independent random variables
stat147 Probabilities of two random variables given their joint distribution
stat148 Conditional probabilities of two random variables given their joint distribution

Distributions

stat156 Binomial problems: Mean and standard deviation
stat174 Binomial problems: Basic
stat155 Binomial problems: Advanced
stat157 Standard normal probabilities
stat760 Standard normal values: Basic
stat160 Standard normal values: Advanced
stat159 Normal versus standard normal density curves
stat161 Normal distribution raw scores
stat162 Mean and deviation of a normal distribution
stat163 Normal distribution: Word problems
stat173 t distribution
stat170 Chi-square distribution
stat187 Normal approximation to binomial
stat185 Central limit theorem: Sample mean
stat186 Central limit theorem: Sample sum
stat188 Central limit theorem: Sample proportion

Inferential Statistics

stat200 Selecting a distribution for inferences on the population mean
stat201 Confidence interval for the population mean: Use of the standard normal
stat755 Choosing an appropriate sample size
stat202 Confidence interval for the population mean: Use of the t distribution
stat203 Confidence interval for a population proportion
stat205 Confidence interval for the difference of population means: Use of the standard normal
stat206 Confidence interval for the difference of population means: Use of the t distribution
stat207 Confidence interval for the difference of population proportions
stat300 Determining null and alternative hypotheses
stat190 Type I and Type II errors
stat192 Type I and Type II errors and power
stat194 Effect size, sample size, and power
stat301 Hypothesis test for the population mean: Z test
stat302 Hypothesis test for the population mean: t test
stat303 Hypothesis test for a population proportion
stat305 Hypothesis test for the difference of population means: Z test
stat309 Hypothesis test for the difference of population means: Paired comparisons
stat306 Hypothesis test for the difference of population means: t test
stat307 Hypothesis test for the difference of population proportions
stat319 Contingency tables: Expected frequencies
stat320 Chi-square goodness-of-fit test
stat321 Chi-square test of independence

Regression and Correlation

stat339 Sketching the least-squares regression line
stat333 Linear relationship and the sample correlation coefficient
stat340 Predictions from the least-squares regression line
stat930 Computing the sample correlation coefficient and the coefficients for the least-squares regression line
stat931 Explained and unexplained variation and the least-squares regression line

stat325 Confidence intervals and prediction intervals from simple linear regression
 stat947 Hypothesis tests for the correlation coefficient and the slope of the least-squares regression line

Out

stat171 F distribution
 stat204 Confidence interval for the population standard deviation
 stat208 Confidence interval for the ratio of population variances
 stat304 Hypothesis test for the population variance or standard deviation
 stat308 Hypothesis test for the ratio of population variances
 stat326 Sign test
 stat327 Wilcoxon signed-ranks test
 stat400 Interpreting the regression coefficients
 stat401 Identifying degrees of freedom
 stat402 ANOVA table: Problem type 1
 stat403 ANOVA table: Problem type 2
 stat404 F test of a multiple regression model
 stat405 t test of a multiple regression model
 stat422 ANOVA: Mean squares and the common population variance
 stat423 ANOVA: Degrees of freedom and the F statistic
 stat424 ANOVA: Hypothesis tests and the ANOVA table
 stat430 One-way, repeated-measures ANOVA
 stat440 Selecting among t tests and ANOVA tests
 stat442 Interpreting group means from a factorial design
 stat443 Two-way, independent-samples ANOVA
 stat500 Trend lines for yearly data
 stat501 Seasonal indexes: Multiplicative model
 stat502 Moving averages
 stat503 Ratio-to-moving-average method
 stat504 Exponential smoothing
 stat505 Regression with seasonal indicators
 stat600 Interpreting a control chart
 stat601 R charts
 stat602 x-bar charts
 stat603 p charts
 stat604 c charts
 stat605 Acceptance sampling
 stat606 Estimating sigma from an R chart

B.74 Intro. to Statistics**Mathematical Readiness**

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 alge006 Solving a two-step equation with integers
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution

alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge256 Y-intercept of a line
 alge257 X- and y-intercepts of a line given the equation in standard form
 alge070 Writing an equation of a line given the y-intercept and another point
 alge197 Graphing a line given its x- and y-intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge196 Graphing a line through a given point with a given slope

Descriptive Statistics

stat904 Interpreting pie charts
 stat901 Computations from pie charts
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 stat702 Histograms for grouped data
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 stat165 Comparing standard deviations without calculation
 stat023 Box-and-whisker plots
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 stat827 Using back-to-back stem-and-leaf displays to compare data sets
 stat706 Mean, median, and mode: Computations
 stat902 Rejecting unreasonable claims based on average statistics
 stat007 Weighted mean: Tabular data
 stat719 Estimating the mean of grouped data
 stat009 Percentiles
 stat021 Population standard deviation
 stat011 Sample standard deviation
 stat729 Estimating the standard deviation of grouped data
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 stat798 Mean, median, and mode: Comparisons
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 stat226 Die rolling
 stat114 Probability of intersection or union: Word problems
 stat115 Independent events: Basic
 stat120 Probability of union: Basic
 stat104 Mutually exclusive events: Two events
 stat102 Mutually exclusive events: Three events
 stat850 Probability of independent events
 stat105 Independent events: Two events
 stat103 Independent events: Three events
 stat113 The curious die

stat020 Calculating relative frequencies in a contingency table
 stat116 Conditional probability: Basic
 stat851 Probability of dependent events
 stat109 Intersection and conditional probability
 stat107 Conditional probability: Mutually exclusive events
 stat108 Conditional probability: Independent events
 stat756 Tree diagrams for conditional probabilities
 stat110 Law of total probabilities
 stat111 Bayes' theorem

Random Variables and Distributions

stat777 Classification of variables and levels of measurement
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 stat143 Discrete probability distribution: Word problems
 stat149 Cumulative distribution function
 stat150 Expectation and variance of a random variable
 stat153 Rules for expectation and variance of random variables
 stat145 Marginal distributions of two discrete random variables
 stat146 Joint distributions of dependent or independent random variables
 stat147 Probabilities of two random variables given their joint distribution
 stat148 Conditional probabilities of two random variables given their joint distribution
 stat156 Binomial problems: Mean and standard deviation
 stat174 Binomial problems: Basic
 stat155 Binomial problems: Advanced
 stat157 Standard normal probabilities
 stat760 Standard normal values: Basic
 stat160 Standard normal values: Advanced
 stat159 Normal versus standard normal density curves
 stat161 Normal distribution raw scores
 stat162 Mean and deviation of a normal distribution
 stat163 Normal distribution: Word problems
 stat173 t distribution
 stat170 Chi-square distribution
 stat171 F distribution
 stat187 Normal approximation to binomial
 stat185 Central limit theorem: Sample mean
 stat186 Central limit theorem: Sample sum
 stat188 Central limit theorem: Sample proportion

Confidence Intervals and Hypothesis Testing

stat200 Selecting a distribution for inferences on the population mean
 stat201 Confidence interval for the population mean: Use of the standard normal
 stat202 Confidence interval for the population mean: Use of the t distribution
 stat203 Confidence interval for a population proportion
 stat204 Confidence interval for the population standard deviation
 stat205 Confidence interval for the difference of population means: Use of the standard normal
 stat206 Confidence interval for the difference of population means: Use of the t distribution
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 stat208 Confidence interval for the ratio of population variances
 stat755 Choosing an appropriate sample size
 stat190 Type I and Type II errors
 stat192 Type I and Type II errors and power
 stat194 Effect size, sample size, and power
 stat300 Determining null and alternative hypotheses
 stat301 Hypothesis test for the population mean: Z test

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stat304 Hypothesis test for the population variance or standard deviation
stat305 Hypothesis test for the difference of population means: Z test
stat309 Hypothesis test for the difference of population means: Paired comparisons
stat306 Hypothesis test for the difference of population means: t test
stat307 Hypothesis test for the difference of population proportions
stat308 Hypothesis test for the ratio of population variances

Regression and Correlation

stat339 Sketching the least-squares regression line
stat333 Linear relationship and the sample correlation coefficient
stat340 Predictions from the least-squares regression line
stat930 Computing the sample correlation coefficient and the coefficients for the least-squares regression line
stat931 Explained and unexplained variation and the least-squares regression line
stat325 Confidence intervals and prediction intervals from simple linear regression
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stat400 Interpreting the regression coefficients
stat401 Identifying degrees of freedom
stat402 ANOVA table: Problem type 1
stat403 ANOVA table: Problem type 2
stat404 F test of a multiple regression model
stat405 t test of a multiple regression model

ANOVA, Chi-square and Nonparametric Tests

stat422 ANOVA: Mean squares and the common population variance
stat423 ANOVA: Degrees of freedom and the F statistic
stat424 ANOVA: Hypothesis tests and the ANOVA table
stat430 One-way, repeated-measures ANOVA
stat442 Interpreting group means from a factorial design
stat443 Two-way, independent-samples ANOVA
stat440 Selecting among t tests and ANOVA tests
stat319 Contingency tables: Expected frequencies
stat320 Chi-square goodness-of-fit test
stat321 Chi-square test of independence
stat326 Sign test
stat327 Wilcoxon signed-ranks test

Quality Control

stat500 Trend lines for yearly data
stat501 Seasonal indexes: Multiplicative model
stat502 Moving averages
stat503 Ratio-to-moving-average method
stat504 Exponential smoothing
stat505 Regression with seasonal indicators
stat600 Interpreting a control chart
stat601 R charts
stat602 \bar{x} -bar charts
stat603 p charts
stat604 c charts
stat605 Acceptance sampling
stat606 Estimating sigma from an R chart

B.75 Chemistry

Algebra Readiness

arith231 Integer multiplication and division
arith067 Simplifying a fraction
arith212 Equivalent fractions
arith105 Signed fraction multiplication: Advanced
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith234 Signed decimal addition and subtraction with 3 numbers
arith030 Finding a percentage of a whole number without a calculator: Basic
arith047 Evaluating expressions with exponents: Problem type 1
arith049 Evaluating expressions with exponents: Problem type 2
arith042 Evaluating an expression with a negative exponent: Positive fraction base
alge024 Introduction to the product rule of exponents
alge026 Quotient of expressions involving exponents
arith602 Estimating a square root
arith601 Square root of a rational perfect square
alge080 Simplifying a radical expression with an even exponent
alge004 Evaluating a quadratic expression: Integers
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge607 Combining like terms: Integer coefficients
alge663 Combining like terms: Advanced
alge160 Algebraic symbol manipulation
alge006 Solving a two-step equation with integers
alge200 Solving an equation to find the value of an expression
alge197 Graphing a line given its x- and y-intercepts
alge194 Graphing a line given its equation in slope-intercept form
alge195 Graphing a line given its equation in standard form
alge196 Graphing a line through a given point with a given slope
alge637 Determining the slope of a line given its graph
unit041 Volume of a cube or a rectangular prism
geom802 Circumference and area of a circle
unit841 Volume of a sphere
unit029 Volume of a cylinder

Measurement

arith082 Multiplication of a decimal by a power of ten
arith083 Division of a decimal by a power of ten
scinot101 Converting between decimal numbers and numbers written in scientific notation
scinot102 Multiplying and dividing numbers written in scientific notation
scinot103 Calculating positive powers of scientific notation
scinot007 Finding negative powers of scientific notation
unit040 Identifying SI units
unit014 Interconversion of prefixed and base SI units
unit015 Interconversion of prefixed SI units
unit016 Interconverting compound SI units
unit038 Interconverting derived SI units
unit032 Interconverting temperatures in Celsius and Kelvins
unit033 Interconverting temperatures in Celsius and Fahrenheit
unit017 Adding and subtracting simple units
unit018 Multiplying and dividing simple units
unit019 Powers and roots of powers of simple units
unit020 Forming compound units
unit021 Adding and subtracting compound units
unit022 Multiplying and dividing compound units

unit023 Powers and roots of compound units
sigfig001 Counting significant digits
sigfig002 Rounding to a given significant digit
sigfig003 Counting significant digits when measurements are added or subtracted
sigfig004 Counting significant digits when measurements are multiplied or divided
sigfig005 Adding or subtracting and multiplying or dividing measurements

Matter and Energy

atom015 Distinguishing elements and compounds
atom016 Distinguishing compounds and mixtures
atom034 Distinguishing chemical and physical change
atom033 Distinguishing solid, liquid and gas phases of a pure substance
atom001 Names and symbols of important elements
atom002 Reading a Periodic Table entry
atom042 Understanding periods and groups of the Periodic Table
atom003 Organization of the Periodic Table
atom005 Standard chemical and physical states of the elements
atom038 Using the Periodic Table to identify similar elements
atom046 Understanding periodic trends in atomic size
atom047 Understanding periodic trends in atomic ionizability
thermo008 Interconverting calories and joules
thermo011 Calculating specific heat capacity
thermo009 Using specific heat capacity to find heat
thermo010 Using specific heat capacity to find temperature change
atom041 Understanding the organization of the electromagnetic spectrum

Atoms and Molecules

atom006 Counting protons and electrons in atoms and atomic ions
atom029 Finding isoprotonic atoms
atom030 Finding isoelectronic atoms
atom004 Isotopes
atom012 Predicting the ions formed by common main-group elements
atom019 Counting valence electrons in an atomic ion
atom020 Drawing the Lewis dot diagram of a main group atom or common atomic ion
atom048 Counting the electron shells in a neutral atom
atom021 Deducing the allowed quantum numbers of an atomic electron
atom024 Calculating the capacity of electron subshells
atom031 Knowing the subshells of an electron shell
atom025 Interpreting the electron configuration of an atom or atomic ion
atom026 Interpreting the electron configuration of an atom or atomic ion in noble-gas notation
atom027 Writing the electron configuration of an atom or atomic ion with s and p electrons only

Compounds and Reactions

stoich006 Counting the number of atoms in a formula unit
stoich007 Finding mole ratios from chemical formulae
stoich008 Finding chemical formulae from a mole ratio
stoich009 Finding molar mass from chemical formulae
stoich010 Finding mass percent from chemical formulae
stoich011 Elemental analysis
atom045 Understanding the prefixes used in naming binary compounds
atom014 Naming binary covalent compounds
atom017 Predicting whether a compound is ionic or molecular

atom007 Predicting the formula of binary ionic compounds
atom008 Naming binary ionic compounds
atom028 Deducing the ions in a binary ionic compound from its empirical formula
atom013 Predicting and naming ionic compounds formed by two elements
atom036 Identifying common polyatomic ions
atom011 Predicting the formula of ionic compounds with common polyatomic ions
atom009 Naming ionic compounds with common polyatomic ions
atom035 Deducing the ions in a polyatomic ionic compound from its empirical formula
atom037 Identifying oxoanions
atom010 Naming ionic compounds with common oxoanions
rxn002 Writing a chemical equation from a description of the reaction
rxn001 Identifying combination, decomposition, single and double displacement reactions
rxn006 Identifying precipitation, combustion and acid-base reactions
stoich012 Stoichiometric coefficients
stoich013 Balancing chemical equations with noninterfering coefficients
stoich014 Balancing chemical equations with interfering coefficients
stoich002 Using the Avogadro Number
stoich003 Calculating and using the molar mass of elements
stoich004 Calculating and using the molar mass of diatomic elements
stoich005 Calculating and using the molar mass of heterodiatomic compounds
stoich015 Solving for a reactant using a chemical equation
stoich017 Limiting reactants
stoich018 Percent yield of chemical reactions
thermo014 Calculating the heat of reaction from molar reaction enthalpy and the mass of a reactant
thermo018 Calculating the heat of reaction from bond energies

Physical Chemistry

gas001 Interconverting pressure and force
gas002 Measuring pressure in non-SI units
gas003 Understanding pressure equilibrium and atmospheric pressure
gas004 Understanding Boyle's Law
gas005 Solving applications of Boyle's Law
gas006 Using Charles's Law
gas007 Using the ideal equation of state
gas008 Interconverting molar mass and density of ideal gases
gas009 Calculating mole fraction in a gas mixture
gas010 Calculating partial pressure in a gas mixture
gas011 Solving for a gaseous reactant
thermo017 Using heat of fusion or vaporization to find the heat needed to melt or boil a substance
thermo019 Relating vapor pressure to vaporization
soln001 Predicting the products of dissolution
soln002 Writing net ionic equations
soln003 Predicting precipitation
stoich019 Calculating mass concentration
stoich026 Using mass concentration to find solute mass and solution volume
stoich027 Solving applied mass concentration problems
stoich020 Calculating molarity using solute moles
stoich028 Using molarity to find solute moles and solution volume
stoich029 Calculating molarity using solute mass
stoich030 Using molarity to find solute mass and solution volume
stoich021 Dilution
stoich022 Calculating mass percent composition
stoich032 Using mass percent composition to find solution volume
stoich037 Solving for a reactant in solution
stoich038 Solving limiting reactant problems in solution
pchem011 Understanding common types of radioactive decay
pchem015 Using the half-life of a radioisotope

Acids and Bases

acid001 Identifying acids and bases by their reaction with water
acid002 Identifying acids and bases by their chemical formula
acid003 Naming inorganic acids
acid004 Deducing the formulae of inorganic acids from their names
acid005 Naming acid salts
acid006 Recognizing common acids and bases
acid007 Understanding the difference between strong and weak acids
acid008 Identifying Bronsted-Lowry acids and bases
acid009 Finding the conjugate of an acid or base
acid010 Predicting the products of the reaction of a strong acid with water
acid011 Predicting the products of a neutralization reaction
acid016 Interconverting pH and hydronium ion concentration
acid017 Using the ion product of water
acid018 Making qualitative estimates of pH change
acid019 Calculating the pH of a strong acid solution
acid021 Diluting a strong acid solution to a given pH
acid020 Calculating the pH of a strong base solution
acid022 Preparing a strong base solution with a given pH
acid023 Determining the volume of base needed to titrate a given mass of acid
acid024 Determining the molar mass of an acid by titration
acid025 Standardizing a base solution by titration

Oxidation and Reduction

redox001 Assigning oxidation numbers
redox002 Recognizing reduction and oxidation
redox003 Identifying oxidizing and reducing agents
redox004 Identifying oxidized and reduced reactants in a metal-nonmetal reaction
redox005 Identifying oxidized and reduced reactants in a single-displacement reaction
redox006 Writing a simple half-reaction from its description
redox007 Writing the half-reactions of a metal-nonmetal reaction
redox008 Writing the half-reactions of a single-displacement reaction
redox011 Predicting whether simple electrochemical reactions happen
redox012 Designing a galvanic cell from a single-displacement redox reaction

Kinetics and Equilibrium

equi009 Predicting how reaction rate varies with pressure, concentration and temperature
equi010 Interpreting a reaction energy diagram
equi011 Relating activation energy to reaction rate
equi012 Calculating the reaction rate of one reactant from that of another
equi013 Drawing the reaction energy diagram of a catalyzed reaction
equi003 Understanding that no reaction goes to 100%
equi004 Predicting relative forward and reverse rates of reaction in a dynamic equilibrium
equi005 Using Le Chatelier's Principle to predict the result of changing concentration or volume
equi006 Using Le Chatelier's Principle to predict the result of changing temperature
equi007 Writing an equilibrium constant expression
equi014 Writing an equilibrium constant expression for a heterogeneous equilibrium
equi008 Using an equilibrium constant to predict the direction of spontaneous reaction

Organic Chemistry

ochem001 Identifying organic compounds
ochem003 Interpreting condensed chemical structures
ochem004 Identifying organic functional groups
ochem008 Naming normal alkanes
ochem009 Using family suffixes to name organic compounds

B.76 Prep. for AP Chemistry

Math and Algebra

arith231 Integer multiplication and division
arith067 Simplifying a fraction
arith212 Equivalent fractions
arith116 Signed fraction addition or subtraction: Basic
arith822 Signed fraction multiplication: Basic
arith814 Signed fraction division
arith047 Evaluating expressions with exponents: Problem type 1
arith651 Introduction to inequalities
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith681 Introduction to order of operations
arith029 Ordering numbers with positive exponents
alge790 Evaluating expressions with exponents of zero
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith695 Complex fraction without variables: Problem type 1
arith016 Square root of a perfect square
arith764 Introduction to square root multiplication
arith071 Absolute value of a number
alge004 Evaluating a quadratic expression: Integers
alge607 Combining like terms: Integer coefficients
alge293 Combining like terms in a quadratic expression
alge604 Distributive property: Integer coefficients
alge608 Using distribution and combining like terms to simplify: Univariate
alge024 Introduction to the product rule of exponents
alge311 Product rule with positive exponents: Univariate
alge961 Introduction to the product rule with negative exponents
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge755 Quotient rule with negative exponents: Problem type 1
alge305 Introduction to the power of a product rule of exponents
alge927 Power and quotient rules with positive exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge032 Squaring a binomial: Univariate
alge983 Multiplying binomials with leading coefficients greater than 1
alge053 Multiplying rational expressions involving multivariate monomials
alge470 Complex fraction involving univariate monomials
alge264 Square root of a perfect square monomial
alge733 Writing a one-step expression for a real-world situation
alge730 Writing a multi-step equation for a real-world situation
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge873 Identifying solutions to a linear equation in two variables
alge010 Additive property of equality with integers
alge266 Additive property of equality with a negative coefficient
alge012 Multiplicative property of equality with signed fractions
alge837 Solving a multi-step equation given in fractional form
alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge160 Algebraic symbol manipulation
alge014 Solving a word problem with two unknowns using a linear equation
alge849 Additive property of inequality with integers
alge856 Solving a two-step linear inequality: Problem type 2
alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced

alge963 Applying the quadratic formula: Decimal answers
 alge214 Discriminant of a quadratic equation
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge875 Classifying slopes given graphs of lines
 alge637 Determining the slope of a line given its graph
 alge685 Finding slope given two points on the line
 alge196 Graphing a line through a given point with a given slope
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge194 Graphing a line given its equation in slope-intercept form
 alge070 Writing an equation of a line given the y-intercept and another point
 alge631 Finding the slope of a line given its equation
 scilog001 Evaluating a logarithmic expression
 scilog002 Solving an equation of the form $\log_b a = c$
 scilog003 Basic properties of logarithms
 scilog004 Expanding a logarithmic expression: Problem type 1
 scilog005 Expanding a logarithmic expression: Problem type 2
 scilog006 Writing an expression as a single logarithm
 scilog007 Converting between common logarithmic and exponential equations
 pcalc799 Converting between natural logarithmic and exponential equations
 pcalc919 Evaluating an exponential function with base e that models a real-world situation
 pcalc804 Solving a multi-step equation involving natural logarithms
 pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic
 pcalc921 Solving an exponential equation by using natural logarithms: Decimal answers
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^{x-b} + c$
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom044 Pythagorean Theorem
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc642 Solving a right triangle
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph
 vector006 Finding the component of a vector along another vector

Science Toolbox

arith082 Multiplication of a decimal by a power of ten
 arith083 Division of a decimal by a power of ten
 scinot101 Converting between decimal numbers and numbers written in scientific notation
 scinot102 Multiplying and dividing numbers written in scientific notation
 scinot103 Calculating positive powers of scientific notation
 scinot007 Finding negative powers of scientific notation
 unit043 Knowing the dimension of common simple SI units
 unit044 Understanding the purpose of SI prefixes
 unit045 Knowing the value of an SI prefix as a power of 10
 unit014 Interconversion of prefixed and base SI units
 unit015 Interconversion of prefixed SI units
 unit047 Interconverting compound SI units
 unit038 Interconverting derived SI units
 unit032 Interconverting temperatures in Celsius and Kelvins
 unit033 Interconverting temperatures in Celsius and Fahrenheit
 unit048 Addition and subtraction of measurements
 unit049 Simplifying unit expressions
 unit051 Multiplication and division of measurements
 sigfig001 Counting significant digits

sigfig002 Rounding to a given significant digit
sigfig003 Counting significant digits when measurements are added or subtracted
sigfig004 Counting significant digits when measurements are multiplied or divided
sigfig005 Adding or subtracting and multiplying or dividing measurements
thermo002 Understanding how electrostatic potential energy scales with charge and separation

Big Idea 1: Elements and Atoms

atom015 Distinguishing elements and compounds
atom001 Names and symbols of important elements
stoich006 Counting the number of atoms in a formula unit
atom060 Writing a chemical formula given a molecular model
atom061 Writing a chemical formula given a chemical structure
stoich002 Using the Avogadro Number
stoich003 Calculating and using the molar mass of elements
stoich004 Calculating and using the molar mass of diatomic elements
stoich005 Calculating and using the molar mass of heterodiatomic compounds
stoich007 Finding mole ratios from chemical formulae
stoich008 Finding chemical formulae from a mole ratio
stoich009 Finding molar mass from chemical formulae
stoich010 Finding mass percent from chemical formulae
stoich011 Elemental analysis
stoich024 Finding a molecular formula from molar mass and elemental analysis
atom039 Identifying the parts of an atom
atom004 Isotopes
atom058 Finding atomic mass from isotope mass and natural abundance
atom063 Counting the number of protons and electrons in a neutral atom
atom006 Counting protons and electrons in atoms and atomic ions
atom029 Finding isoprotonic atoms
atom030 Finding isoelectronic atoms
atom048 Counting the electron shells in a neutral atom
atom031 Knowing the subshells of an electron shell
atom062 Counting valence electrons in a neutral atom
atom019 Counting valence electrons in an atomic ion
atom020 Drawing the Lewis dot diagram of a main group atom or common atomic ion
atom055 Deducing n and l from a subshell label
atom021 Deducing the allowed quantum numbers of an atomic electron
atom056 Deciding the relative energy of electron subshells
atom024 Calculating the capacity of electron subshells
atom057 Drawing a box diagram of the electron configuration of an atom
atom077 Interpreting the electron configuration of a neutral atom
atom073 Interpreting the electron configuration of a neutral atom in noble-gas notation
atom076 Writing the electron configuration of a neutral atom with s and p electrons only
atom075 Writing the electron configuration of a neutral atom with a filled d subshell
atom022 Writing the electron configuration of an atom using the Periodic Table
atom078 Writing the electron configuration of a first transition series atom
atom079 Interpreting an outer electron box diagram
atom080 Drawing the outer electron box diagram of a transition metal cation
atom067 Understanding the definitions of ionization energy and electron affinity
atom069 Deducing valence electron configuration from trends in successive ionization energies
atom025 Interpreting the electron configuration of an atom or atomic ion
atom026 Interpreting the electron configuration of an atom or atomic ion in noble-gas notation
atom027 Writing the electron configuration of an atom or atomic ion with s and p electrons only
atom032 Identifying the electron added or removed to form an ion from an s or p block atom
atom059 Identifying the electron added or removed to form an ion
atom023 Identifying quantum mechanics errors in electron configurations
atom051 Understanding the meaning of a de Broglie wavelength
atom052 Interpreting the radial probability distribution of an orbital
atom053 Interpreting the angular probability distribution of an orbital
atom054 Recognizing s and p orbitals

atom070 Ranking the screening efficacy of atomic orbitals
atom002 Reading a Periodic Table entry
atom042 Understanding periods and groups of the Periodic Table
atom003 Organization of the Periodic Table
atom005 Standard chemical and physical states of the elements
atom038 Using the Periodic Table to identify similar elements
atom065 Identifying s, p, d and f block elements
atom072 Deducing the block of an element from an electron configuration
atom066 Identifying elements with a similar valence electron configuration
atom081 Identifying transition metal cations with a given number of d electrons
atom082 Deducing the number of d electrons and unpaired spins in a transition metal cation
atom083 Understanding the exceptional electron configurations in the first transition series
atom012 Predicting the ions formed by common main-group elements
atom068 Predicting the relative ionization energy of elements
atom046 Understanding periodic trends in atomic size
atom047 Understanding periodic trends in atomic ionizability
atom071 Understanding periodic trends in effective nuclear charge
ichem001 Understanding words that describe where transition metals lie in the Periodic Table
ichem002 Predicting the relative atomic radius of a transition metal atom
ichem003 Predicting the relative density of a transition metal
ichem004 Predicting the relative melting point of a transition metal
ichem005 Predicting the highest common oxidation state of a metal in the first transition series
atom041 Understanding the organization of the electromagnetic spectrum
atom040 Interconverting the wavelength and frequency of electromagnetic radiation
atom043 Interconverting wavelength, frequency and photon energy
atom044 Calculating the wavelength of a spectral line from an energy diagram
atom049 Predicting the qualitative features of a line spectrum
atom050 Calculating the wavelength of a line in the spectrum of hydrogen
atom034 Distinguishing chemical and physical change
stoich012 Stoichiometric coefficients
stoich016 Identifying the limiting reactant in a drawing of a mixture

Big Idea 2: Properties of Matter

atom016 Distinguishing compounds and mixtures
atom033 Distinguishing solid, liquid and gas phases of a pure substance
thermo040 Using a phase diagram to predict phase at a given temperature and pressure
thermo041 Labeling a typical simple phase diagram
thermo042 Using a phase diagram to find a phase transition temperature or pressure
thermo044 Sketching a described thermodynamic change on a phase diagram
pchem001 Identifying important physical properties of liquids
pchem002 Understanding consequences of important physical properties of liquids
thermo019 Relating vapor pressure to vaporization
thermo046 Identifying phase transitions on a heating curve
thermo047 Interpreting a heating curve
thermo045 Drawing a heating curve
gas001 Interconverting pressure and force
gas019 Interconverting atmospheres and kilopascals
gas020 Interconverting atmospheres and torr
gas003 Understanding pressure equilibrium and atmospheric pressure
gas004 Understanding Boyle's Law
gas005 Solving applications of Boyle's Law
gas006 Using Charles's Law
gas007 Using the ideal equation of state
gas008 Interconverting molar mass and density of ideal gases
gas009 Calculating mole fraction in a gas mixture
gas010 Calculating partial pressure in a gas mixture
gas012 Understanding how average molecular kinetic energy scales with temperature
gas013 Understanding how average molecular speed scales with temperature and molar mass
gas014 Interpreting a graph of molecular speed distribution

gas018 Using relative effusion rates to find an unknown molar mass
soln001 Predicting the products of dissolution
soln020 Understanding how solubility varies with temperature and pressure
soln011 Applying like dissolves like
stoich020 Calculating molarity using solute moles
stoich028 Using molarity to find solute moles and solution volume
stoich029 Calculating molarity using solute mass
stoich030 Using molarity to find solute mass and solution volume
stoich021 Dilution
soln012 Calculating solubility
soln019 Using solubility to calculate solute mass or solution volume
soln010 Using Henry's Law to calculate the solubility of a gas
stoich019 Calculating mass concentration
stoich026 Using mass concentration to find solute mass and solution volume
stoich022 Calculating mass percent composition
stoich032 Using mass percent composition to find solution volume
soln006 Calculating molality
soln008 Calculating mole fraction
soln005 Predicting relative boiling point elevations and freezing point depressions
soln021 Using the K_f and K_b equations
soln007 Using osmotic pressure to find molar mass
soln009 Using Raoult's Law to calculate the vapor pressure of a component
atom045 Understanding the prefixes used in naming binary compounds
atom014 Naming binary covalent compounds
atom017 Predicting whether a compound is ionic or molecular
atom007 Predicting the formula of binary ionic compounds
atom008 Naming binary ionic compounds
atom028 Deducing the ions in a binary ionic compound from its empirical formula
atom064 Predicting ionic compounds formed by two elements
atom013 Predicting and naming ionic compounds formed by two elements
atom036 Identifying common polyatomic ions
atom011 Predicting the formula of ionic compounds with common polyatomic ions
atom009 Naming ionic compounds with common polyatomic ions
atom035 Deducing the ions in a polyatomic ionic compound from its empirical formula
atom037 Identifying oxoanions
atom010 Naming ionic compounds with common oxoanions
ichem027 Predicting the relative stability of ionic crystals from a sketch
ichem028 Predicting the relative lattice energy of binary ionic compounds
thermo055 Interpreting a Born-Haber cycle
ichem026 Drawing the unit cell of a 2D lattice
ichem029 Counting the atoms in a unit cell
ichem030 Recognizing and naming close-packed crystal lattices
ichem031 Recognizing and naming lattices with cubic unit cells
ichem032 Calculating key distances in the fcc unit cell
ichem033 Calculating key distances in the bcc unit cell
ichem034 Finding an atomic radius from an fcc or bcc lattice constant
ichem035 Finding density from an fcc or bcc lattice constant

Big Idea 3: Transformations of Matter

stoich013 Balancing chemical equations with noninterfering coefficients
stoich014 Balancing chemical equations with interfering coefficients
rxn002 Writing a chemical equation from a description of the reaction
rxn004 Writing the net equation for a sequence of reactions
soln002 Writing net ionic equations
stoich015 Solving for a reactant using a chemical equation
stoich017 Limiting reactants
stoich041 Theoretical yield of chemical reactions
stoich018 Percent yield of chemical reactions
gas011 Solving for a gaseous reactant

stoich037 Solving for a reactant in solution
stoich038 Solving limiting reactant problems in solution
rxn001 Identifying combination, decomposition, single and double displacement reactions
rxn006 Identifying precipitation, combustion and acid-base reactions
soln003 Predicting precipitation
acid002 Identifying acids and bases by their chemical formula
acid001 Identifying acids and bases by their reaction with water
acid011 Predicting the products of a neutralization reaction
acid003 Naming inorganic acids
acid004 Deducing the formulae of inorganic acids from their names
acid006 Recognizing common acids and bases
acid005 Naming acid salts
acid008 Identifying Bronsted-Lowry acids and bases
acid009 Finding the conjugate of an acid or base
acid010 Predicting the products of the reaction of a strong acid with water
acid032 Predicting the qualitative acid-base properties of salts
acid044 Predicting the relative acidity of binary acids
acid045 Understanding the effect of induction on acidity
acid046 Predicting the qualitative acid-base properties of metal cations
acid047 Identifying Lewis acids and bases in reactions
acid049 Predicting the acid-base properties of a binary oxide in water
ichem006 Predicting the reaction of a transition metal with a strong acid
redox001 Assigning oxidation numbers
redox002 Recognizing reduction and oxidation
redox003 Identifying oxidizing and reducing agents
redox004 Identifying oxidized and reduced reactants in a metal-nonmetal reaction
redox005 Identifying oxidized and reduced reactants in a single-displacement reaction
redox011 Predicting whether simple electrochemical reactions happen
redox006 Writing a simple half-reaction from its description
redox007 Writing the half-reactions of a metal-nonmetal reaction
redox008 Writing the half-reactions of a single-displacement reaction
redox009 Writing and balancing complex half-reactions in acidic solution
redox010 Writing and balancing complex half-reactions in basic solution
redox013 Balancing a complex redox equation in acidic or basic solution
redox014 Writing the half-reactions of a complex redox reaction in acidic or basic solution
redox012 Designing a galvanic cell from a single-displacement redox reaction
redox016 Designing a galvanic cell from two half-reactions
redox017 Analyzing a galvanic cell
redox018 Picking a reduction or oxidation that will make a galvanic cell work
redox019 Ranking the strength of oxidizing and reducing agents using standard reduction potentials
redox020 Calculating standard reaction free energy from standard reduction potentials
redox026 Recognizing consistency among equilibrium constant, free energy, and cell potential
redox021 Using the Nernst equation to calculate nonstandard cell voltage
redox022 Using the relationship between charge, current and time
redox023 Using the Faraday constant
redox024 Analyzing the electrolysis of molten salt
redox025 Calculating the mass of an electrolysis product from the applied current

Big Idea 4: Chemical Kinetics

equi012 Calculating the reaction rate of one reactant from that of another
equi032 Calculating average and instantaneous reaction rate from a graph of concentration versus time
equi009 Predicting how reaction rate varies with pressure, concentration and temperature
equi019 Using a rate law
equi020 Using reactant reaction order to predict changes in initial rate
equi021 Deducing a rate law from initial reaction rate data
equi029 Deducing a rate law from the change in concentration over time
equi023 Calculating the change in concentration after a whole number of half-lives of a first-order reaction
equi030 Finding half life and rate constant from a graph of concentration versus time
equi022 Using an integrated rate law for a first-order reaction

equi027 Using a second-order integrated rate law to find concentration change
equi028 Using first- and second-order integrated rate laws
gas017 Understanding how molecular collision rate scales with temperature and volume
equi033 Identifying the molecularity of an elementary reaction
equi010 Interpreting a reaction energy diagram
equi011 Relating activation energy to reaction rate
equi024 Understanding the qualitative predictions of the Arrhenius equation
equi025 Using the Arrhenius equation to calculate k at one temperature from k at another
equi026 Using the Arrhenius equation to calculate E_a from k versus T data
equi034 Identifying intermediates in a reaction mechanism
equi035 Writing a plausible missing step for a simple reaction mechanism
equi040 Deducing information about reaction mechanisms from a reaction energy diagram
equi036 Writing the rate law of an elementary reaction
equi037 Writing the rate law implied by a simple mechanism with an initial slow step
equi038 Expressing the concentration of an intermediate in terms of the concentration of reactants
equi039 Writing the rate law implied by a simple mechanism
equi013 Drawing the reaction energy diagram of a catalyzed reaction

Big Idea 5: Thermodynamics

thermo001 Understanding how kinetic energy scales with mass and speed
thermo051 Calculating kinetic energy
gas015 Predicting how molecular speed distribution changes with temperature and molar mass
gas016 Calculating average molecular speed
thermo003 Using conservation of energy to predict the qualitative exchange of kinetic and potential energy
thermo005 Calculating pressure-volume work
thermo006 Understanding the definitions of heat and work
thermo007 Understanding the definition of enthalpy
thermo008 Interconverting calories and joules
thermo011 Calculating specific heat capacity
thermo009 Using specific heat capacity to find heat
thermo010 Using specific heat capacity to find temperature change
thermo013 Calculating molar heat capacity
thermo017 Using heat of fusion or vaporization to find the heat needed to melt or boil a substance
thermo052 Understanding the connection between vapor pressure, boiling point, and enthalpy of vaporization
thermo053 Calculating vapor pressure from boiling point and enthalpy of vaporization
thermo054 Calculating enthalpy of vaporization from vapor pressure
thermo020 Using the general properties of reaction enthalpy
thermo014 Calculating the heat of reaction from molar reaction enthalpy and the mass of a reactant
thermo021 Using Hess's Law to calculate net reaction enthalpy
thermo022 Writing a standard formation reaction
thermo023 Calculating a molar heat of reaction from formation enthalpies
thermo043 Calculating the heat of reaction from bond energies and Lewis structures
thermo018 Calculating the heat of reaction from bond energies
soln013 Understanding conceptual components of the enthalpy of solution
thermo024 Calculating entropy change from reversible heat flow
thermo026 Calculating absolute entropy using the Boltzmann hypothesis
thermo027 Calculating entropy change using the Boltzmann hypothesis
thermo028 Predicting qualitatively how entropy changes with temperature and volume
thermo029 Predicting qualitatively how entropy changes with mixing and separation
thermo030 Qualitatively predicting reaction entropy
thermo031 Calculating reaction entropy using the standard molar entropies of reactants
thermo032 Using the general properties of Gibbs free energy
thermo033 Calculating dG from dH and dS
thermo034 Using the conditions of spontaneity to deduce the signs of ΔH and ΔS
thermo035 Calculating standard reaction free energy from standard free energies of formation
thermo037 Estimating a phase transition temperature from standard thermodynamic data

Big Idea 6: Chemical Equilibrium

equi003 Understanding that no reaction goes to 100%
equi004 Predicting relative forward and reverse rates of reaction in a dynamic equilibrium
equi041 Writing a concentration equilibrium constant expression
equi042 Writing a pressure equilibrium constant expression
equi046 Calculating an equilibrium constant from an equilibrium composition
equi045 Writing the concentration equilibrium expression for a heterogeneous equilibrium
equi044 Writing the pressure equilibrium expression for a heterogeneous equilibrium
equi043 Calculating an equilibrium constant from a heterogeneous equilibrium composition
equi008 Using an equilibrium constant to predict the direction of spontaneous reaction
equi015 Using the general properties of equilibrium constants
equi016 Setting up a reaction table
equi017 Calculating equilibrium composition from an equilibrium constant
equi005 Using Le Chatelier's Principle to predict the result of changing concentration or volume
equi006 Using Le Chatelier's Principle to predict the result of changing temperature
acid007 Understanding the difference between strong and weak acids
acid035 Identifying the major species in weak acid or weak base equilibria
acid026 Writing an acid dissociation constant expression
acid013 Interconverting hydronium and hydroxide concentration at 25°C
acid016 Interconverting pH and hydronium ion concentration
acid012 Interconverting pH and pOH at 25°C
acid018 Making qualitative estimates of pH change
acid019 Calculating the pH of a strong acid solution
acid020 Calculating the pH of a strong base solution
acid021 Diluting a strong acid solution to a given pH
acid022 Preparing a strong base solution with a given pH
acid027 Calculating the K_a of a weak acid from pH
acid028 Calculating the pH of a weak acid solution
acid029 Writing a base protonation constant expression
acid030 Calculating the pH of a weak base solution
acid031 Deriving K_b from K_a
acid042 Interconverting K_a and pK_a
acid048 Calculating the pH of a salt solution
acid036 Setting up a reaction table for a pH calculation with a common ion
acid037 Calculating the pH of a buffer
acid038 Calculating the composition of a buffer of a given pH
acid023 Determining the volume of base needed to titrate a given mass of acid
acid024 Determining the molar mass of an acid by titration
acid025 Standardizing a base solution by titration
acid040 Calculating the pH of a weak acid titrated with a strong base
acid041 Calculating the pH of a weak base titrated with a strong acid
acid043 Calculating the pH at equivalence of a titration
soln014 Writing a solubility product (K_{sp}) expression
soln015 Using K_{sp} to calculate the solubility of a compound
soln016 Using the solubility of a compound to calculate K_{sp}
soln017 Calculating the solubility of an ionic compound when a common ion is present
soln018 Understanding the effect of pH on the solubility of ionic compounds
thermo038 Calculating reaction free energy under nonstandard conditions
thermo039 Using reaction free energy to predict equilibrium composition

Advanced Material

nchem001 Interpreting the symbol for a nuclide
nchem002 Writing the symbols in a nuclear chemical equation
nchem003 Balancing a nuclear chemical equation
nchem006 Writing the equation for a typical radioactive decay
nchem008 Calculating the energy change in a nuclear reaction from the mass change
nchem004 Knowing the properties of the common types of nuclear radiation
nchem005 Understanding the common modes of radioactive decay
nchem009 Understanding radioactive half life
nchem010 Interconverting amount of radioactive decay and half life

nchem011 Calculating radioactive activity from half life
nchem012 Using isotope ratios to radiodate
nchem013 Using activity to radiodate
ichem008 Writing the formula of a metal complex from its description
ichem009 Recognizing typical metal ligands
ichem010 Determining the oxidation state of the metal in a complex ion
ichem011 Naming complex cations with one type of ligand
ichem012 Naming complex anions with one type of ligand
ichem013 Naming complex ions
ichem014 Determining the oxidation state of the metal in a coordination compound
ichem015 Naming coordination compounds
ichem016 Determining the coordination number of a metal in a complex
ichem017 Understanding the connection between geometry and coordination number of a metal complex
ichem018 Distinguishing isomers and alternate views of a metal complex
ichem019 Drawing an isomer of a metal complex
ichem020 Drawing cis and trans isomers of a metal complex
ichem023 Adding electrons to a crystal field theory energy level diagram
ichem024 Predicting color and magnetic properties from a crystal field theory energy level diagram
ichem025 Drawing a crystal field theory energy level diagram
ochem001 Identifying organic compounds
ochem003 Interpreting condensed chemical structures
ochem004 Identifying organic functional groups
ochem005 Identifying the main chain of branched alkanes
ochem006 Numbering the main chain of branched alkanes
ochem007 Interpreting condensed chemical structures with benzene rings
ochem008 Naming normal alkanes
ochem009 Using family suffixes to name organic compounds
ochem010 Naming the parent hydrocarbon of branched alkanes
ochem011 Naming alkyl side chains
ochem012 Naming branched alkanes
ochem013 Using multiplying affixes in the names of branched alkanes
ochem016 Naming unbranched alkenes and alkynes
ochem017 Naming alkenes and alkynes
ochem018 Naming alkyl halides
ochem019 Naming alcohols
ochem020 Naming aldehydes and acids
ochem021 Naming benzene derivatives

B.77 AP Chemistry

Math and Algebra

arith231 Integer multiplication and division
arith067 Simplifying a fraction
arith212 Equivalent fractions
arith116 Signed fraction addition or subtraction: Basic
arith822 Signed fraction multiplication: Basic
arith814 Signed fraction division
arith047 Evaluating expressions with exponents: Problem type 1
arith651 Introduction to inequalities
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith681 Introduction to order of operations
arith029 Ordering numbers with positive exponents
alge790 Evaluating expressions with exponents of zero
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith695 Complex fraction without variables: Problem type 1

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 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge755 Quotient rule with negative exponents: Problem type 1
 alge305 Introduction to the power of a product rule of exponents
 alge927 Power and quotient rules with positive exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge032 Squaring a binomial: Univariate
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge053 Multiplying rational expressions involving multivariate monomials
 alge470 Complex fraction involving univariate monomials
 alge264 Square root of a perfect square monomial
 alge733 Writing a one-step expression for a real-world situation
 alge730 Writing a multi-step equation for a real-world situation
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge873 Identifying solutions to a linear equation in two variables
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 alge160 Algebraic symbol manipulation
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 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge963 Applying the quadratic formula: Decimal answers
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 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge875 Classifying slopes given graphs of lines
 alge637 Determining the slope of a line given its graph
 alge685 Finding slope given two points on the line
 alge196 Graphing a line through a given point with a given slope
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge194 Graphing a line given its equation in slope-intercept form
 alge070 Writing an equation of a line given the y -intercept and another point
 alge631 Finding the slope of a line given its equation
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 scilog007 Converting between common logarithmic and exponential equations
 pcalc799 Converting between natural logarithmic and exponential equations

pcalc919 Evaluating an exponential function with base e that models a real-world situation
pcalc804 Solving a multi-step equation involving natural logarithms
pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic
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geom001 Finding an angle measure of a triangle given two angles
geom908 Finding an angle measure for a triangle with an extended side
geom309 Finding an angle measure for a triangle sharing a side with another triangle
geom044 Pythagorean Theorem
pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
pcalc607 Using a trigonometric ratio to find a side length in a right triangle
pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
pcalc642 Solving a right triangle
vector002 Finding the magnitude and direction of a vector given its graph
vector005 Finding the components of a vector given its graph
vector006 Finding the component of a vector along another vector

Science Toolbox

arith082 Multiplication of a decimal by a power of ten
arith083 Division of a decimal by a power of ten
scinot101 Converting between decimal numbers and numbers written in scientific notation
scinot102 Multiplying and dividing numbers written in scientific notation
scinot103 Calculating positive powers of scientific notation
scinot007 Finding negative powers of scientific notation
unit043 Knowing the dimension of common simple SI units
unit044 Understanding the purpose of SI prefixes
unit045 Knowing the value of an SI prefix as a power of 10
unit014 Interconversion of prefixed and base SI units
unit015 Interconversion of prefixed SI units
unit047 Interconverting compound SI units
unit038 Interconverting derived SI units
unit032 Interconverting temperatures in Celsius and Kelvins
unit033 Interconverting temperatures in Celsius and Fahrenheit
unit048 Addition and subtraction of measurements
unit049 Simplifying unit expressions
unit051 Multiplication and division of measurements
sigfig001 Counting significant digits
sigfig002 Rounding to a given significant digit
sigfig003 Counting significant digits when measurements are added or subtracted
sigfig004 Counting significant digits when measurements are multiplied or divided
sigfig005 Adding or subtracting and multiplying or dividing measurements
thermo002 Understanding how electrostatic potential energy scales with charge and separation

Big Idea 1: Elements and Atoms

atom015 Distinguishing elements and compounds
atom001 Names and symbols of important elements
stoich006 Counting the number of atoms in a formula unit
atom060 Writing a chemical formula given a molecular model
atom061 Writing a chemical formula given a chemical structure
stoich002 Using the Avogadro Number
stoich003 Calculating and using the molar mass of elements
stoich004 Calculating and using the molar mass of diatomic elements
stoich005 Calculating and using the molar mass of heterodiatomous compounds
stoich007 Finding mole ratios from chemical formulae
stoich008 Finding chemical formulae from a mole ratio

stoich009 Finding molar mass from chemical formulae
stoich010 Finding mass percent from chemical formulae
stoich011 Elemental analysis
stoich024 Finding a molecular formula from molar mass and elemental analysis
atom039 Identifying the parts of an atom
atom004 Isotopes
atom058 Finding atomic mass from isotope mass and natural abundance
atom063 Counting the number of protons and electrons in a neutral atom
atom006 Counting protons and electrons in atoms and atomic ions
atom029 Finding isotopic atoms
atom030 Finding isoelectronic atoms
atom048 Counting the electron shells in a neutral atom
atom031 Knowing the subshells of an electron shell
atom062 Counting valence electrons in a neutral atom
atom019 Counting valence electrons in an atomic ion
atom020 Drawing the Lewis dot diagram of a main group atom or common atomic ion
atom055 Deducing n and l from a subshell label
atom021 Deducing the allowed quantum numbers of an atomic electron
atom056 Deciding the relative energy of electron subshells
atom024 Calculating the capacity of electron subshells
atom057 Drawing a box diagram of the electron configuration of an atom
atom077 Interpreting the electron configuration of a neutral atom
atom073 Interpreting the electron configuration of a neutral atom in noble-gas notation
atom076 Writing the electron configuration of a neutral atom with s and p electrons only
atom075 Writing the electron configuration of a neutral atom with a filled d subshell
atom022 Writing the electron configuration of an atom using the Periodic Table
atom078 Writing the electron configuration of a first transition series atom
atom079 Interpreting an outer electron box diagram
atom080 Drawing the outer electron box diagram of a transition metal cation
atom067 Understanding the definitions of ionization energy and electron affinity
atom069 Deducing valence electron configuration from trends in successive ionization energies
atom025 Interpreting the electron configuration of an atom or atomic ion
atom026 Interpreting the electron configuration of an atom or atomic ion in noble-gas notation
atom027 Writing the electron configuration of an atom or atomic ion with s and p electrons only
atom032 Identifying the electron added or removed to form an ion from an s or p block atom
atom059 Identifying the electron added or removed to form an ion
atom023 Identifying quantum mechanics errors in electron configurations
atom051 Understanding the meaning of a de Broglie wavelength
atom052 Interpreting the radial probability distribution of an orbital
atom053 Interpreting the angular probability distribution of an orbital
atom054 Recognizing s and p orbitals
atom070 Ranking the screening efficacy of atomic orbitals
atom002 Reading a Periodic Table entry
atom042 Understanding periods and groups of the Periodic Table
atom003 Organization of the Periodic Table
atom005 Standard chemical and physical states of the elements
atom038 Using the Periodic Table to identify similar elements
atom065 Identifying s , p , d and f block elements
atom072 Deducing the block of an element from an electron configuration
atom066 Identifying elements with a similar valence electron configuration
atom081 Identifying transition metal cations with a given number of d electrons
atom082 Deducing the number of d electrons and unpaired spins in a transition metal cation
atom083 Understanding the exceptional electron configurations in the first transition series
atom012 Predicting the ions formed by common main-group elements
atom068 Predicting the relative ionization energy of elements
atom046 Understanding periodic trends in atomic size
atom047 Understanding periodic trends in atomic ionizability
atom071 Understanding periodic trends in effective nuclear charge
ichem001 Understanding words that describe where transition metals lie in the Periodic Table
ichem002 Predicting the relative atomic radius of a transition metal atom
ichem003 Predicting the relative density of a transition metal
ichem004 Predicting the relative melting point of a transition metal

ichem005 Predicting the highest common oxidation state of a metal in the first transition series
atom041 Understanding the organization of the electromagnetic spectrum
atom040 Interconverting the wavelength and frequency of electromagnetic radiation
atom043 Interconverting wavelength, frequency and photon energy
atom044 Calculating the wavelength of a spectral line from an energy diagram
atom049 Predicting the qualitative features of a line spectrum
atom050 Calculating the wavelength of a line in the spectrum of hydrogen
atom034 Distinguishing chemical and physical change
stoich012 Stoichiometric coefficients
stoich016 Identifying the limiting reactant in a drawing of a mixture

Big Idea 2: Properties of Matter

atom016 Distinguishing compounds and mixtures
atom033 Distinguishing solid, liquid and gas phases of a pure substance
thermo040 Using a phase diagram to predict phase at a given temperature and pressure
thermo041 Labeling a typical simple phase diagram
thermo042 Using a phase diagram to find a phase transition temperature or pressure
thermo044 Sketching a described thermodynamic change on a phase diagram
pchem001 Identifying important physical properties of liquids
pchem002 Understanding consequences of important physical properties of liquids
thermo019 Relating vapor pressure to vaporization
thermo046 Identifying phase transitions on a heating curve
thermo047 Interpreting a heating curve
thermo045 Drawing a heating curve
gas001 Interconverting pressure and force
gas019 Interconverting atmospheres and kilopascals
gas020 Interconverting atmospheres and torr
gas003 Understanding pressure equilibrium and atmospheric pressure
gas004 Understanding Boyle's Law
gas005 Solving applications of Boyle's Law
gas006 Using Charles's Law
gas007 Using the ideal equation of state
gas008 Interconverting molar mass and density of ideal gases
gas009 Calculating mole fraction in a gas mixture
gas010 Calculating partial pressure in a gas mixture
gas012 Understanding how average molecular kinetic energy scales with temperature
gas013 Understanding how average molecular speed scales with temperature and molar mass
gas014 Interpreting a graph of molecular speed distribution
gas018 Using relative effusion rates to find an unknown molar mass
soln001 Predicting the products of dissolution
soln020 Understanding how solubility varies with temperature and pressure
soln011 Applying like dissolves like
stoich020 Calculating molarity using solute moles
stoich028 Using molarity to find solute moles and solution volume
stoich029 Calculating molarity using solute mass
stoich030 Using molarity to find solute mass and solution volume
stoich021 Dilution
soln012 Calculating solubility
soln019 Using solubility to calculate solute mass or solution volume
soln010 Using Henry's Law to calculate the solubility of a gas
stoich019 Calculating mass concentration
stoich026 Using mass concentration to find solute mass and solution volume
stoich022 Calculating mass percent composition
stoich032 Using mass percent composition to find solution volume
soln006 Calculating molality
soln008 Calculating mole fraction
soln005 Predicting relative boiling point elevations and freezing point depressions
soln021 Using the K_f and K_b equations
soln007 Using osmotic pressure to find molar mass

soln009 Using Raoult's Law to calculate the vapor pressure of a component
atom045 Understanding the prefixes used in naming binary compounds
atom014 Naming binary covalent compounds
atom017 Predicting whether a compound is ionic or molecular
atom007 Predicting the formula of binary ionic compounds
atom008 Naming binary ionic compounds
atom028 Deducing the ions in a binary ionic compound from its empirical formula
atom064 Predicting ionic compounds formed by two elements
atom013 Predicting and naming ionic compounds formed by two elements
atom036 Identifying common polyatomic ions
atom011 Predicting the formula of ionic compounds with common polyatomic ions
atom009 Naming ionic compounds with common polyatomic ions
atom035 Deducing the ions in a polyatomic ionic compound from its empirical formula
atom037 Identifying oxoanions
atom010 Naming ionic compounds with common oxoanions
ichem027 Predicting the relative stability of ionic crystals from a sketch
ichem028 Predicting the relative lattice energy of binary ionic compounds
thermo055 Interpreting a Born-Haber cycle
ichem026 Drawing the unit cell of a 2D lattice
ichem029 Counting the atoms in a unit cell
ichem030 Recognizing and naming close-packed crystal lattices
ichem031 Recognizing and naming lattices with cubic unit cells
ichem032 Calculating key distances in the fcc unit cell
ichem033 Calculating key distances in the bcc unit cell
ichem034 Finding an atomic radius from an fcc or bcc lattice constant
ichem035 Finding density from an fcc or bcc lattice constant

Big Idea 3: Transformations of Matter

stoich013 Balancing chemical equations with noninterfering coefficients
stoich014 Balancing chemical equations with interfering coefficients
rxn002 Writing a chemical equation from a description of the reaction
rxn004 Writing the net equation for a sequence of reactions
soln002 Writing net ionic equations
stoich015 Solving for a reactant using a chemical equation
stoich017 Limiting reactants
stoich041 Theoretical yield of chemical reactions
stoich018 Percent yield of chemical reactions
gas011 Solving for a gaseous reactant
stoich037 Solving for a reactant in solution
stoich038 Solving limiting reactant problems in solution
rxn001 Identifying combination, decomposition, single and double displacement reactions
rxn006 Identifying precipitation, combustion and acid-base reactions
soln003 Predicting precipitation
acid002 Identifying acids and bases by their chemical formula
acid001 Identifying acids and bases by their reaction with water
acid011 Predicting the products of a neutralization reaction
acid003 Naming inorganic acids
acid004 Deducing the formulae of inorganic acids from their names
acid006 Recognizing common acids and bases
acid005 Naming acid salts
acid008 Identifying Bronsted-Lowry acids and bases
acid009 Finding the conjugate of an acid or base
acid010 Predicting the products of the reaction of a strong acid with water
acid032 Predicting the qualitative acid-base properties of salts
acid044 Predicting the relative acidity of binary acids
acid045 Understanding the effect of induction on acidity
acid046 Predicting the qualitative acid-base properties of metal cations
acid047 Identifying Lewis acids and bases in reactions
acid049 Predicting the acid-base properties of a binary oxide in water

ichem006 Predicting the reaction of a transition metal with a strong acid
redox001 Assigning oxidation numbers
redox002 Recognizing reduction and oxidation
redox003 Identifying oxidizing and reducing agents
redox004 Identifying oxidized and reduced reactants in a metal-nonmetal reaction
redox005 Identifying oxidized and reduced reactants in a single-displacement reaction
redox011 Predicting whether simple electrochemical reactions happen
redox006 Writing a simple half-reaction from its description
redox007 Writing the half-reactions of a metal-nonmetal reaction
redox008 Writing the half-reactions of a single-displacement reaction
redox009 Writing and balancing complex half-reactions in acidic solution
redox010 Writing and balancing complex half-reactions in basic solution
redox013 Balancing a complex redox equation in acidic or basic solution
redox014 Writing the half-reactions of a complex redox reaction in acidic or basic solution
redox012 Designing a galvanic cell from a single-displacement redox reaction
redox016 Designing a galvanic cell from two half-reactions
redox017 Analyzing a galvanic cell
redox018 Picking a reduction or oxidation that will make a galvanic cell work
redox019 Ranking the strength of oxidizing and reducing agents using standard reduction potentials
redox020 Calculating standard reaction free energy from standard reduction potentials
redox026 Recognizing consistency among equilibrium constant, free energy, and cell potential
redox021 Using the Nernst equation to calculate nonstandard cell voltage
redox022 Using the relationship between charge, current and time
redox023 Using the Faraday constant
redox024 Analyzing the electrolysis of molten salt
redox025 Calculating the mass of an electrolysis product from the applied current

Big Idea 4: Chemical Kinetics

equi012 Calculating the reaction rate of one reactant from that of another
equi032 Calculating average and instantaneous reaction rate from a graph of concentration versus time
equi009 Predicting how reaction rate varies with pressure, concentration and temperature
equi019 Using a rate law
equi020 Using reactant reaction order to predict changes in initial rate
equi021 Deducing a rate law from initial reaction rate data
equi029 Deducing a rate law from the change in concentration over time
equi023 Calculating the change in concentration after a whole number of half-lives of a first-order reaction
equi030 Finding half life and rate constant from a graph of concentration versus time
equi022 Using an integrated rate law for a first-order reaction
equi027 Using a second-order integrated rate law to find concentration change
equi028 Using first- and second-order integrated rate laws
gas017 Understanding how molecular collision rate scales with temperature and volume
equi033 Identifying the molecularity of an elementary reaction
equi010 Interpreting a reaction energy diagram
equi011 Relating activation energy to reaction rate
equi024 Understanding the qualitative predictions of the Arrhenius equation
equi025 Using the Arrhenius equation to calculate k at one temperature from k at another
equi026 Using the Arrhenius equation to calculate E_a from k versus T data
equi034 Identifying intermediates in a reaction mechanism
equi035 Writing a plausible missing step for a simple reaction mechanism
equi040 Deducing information about reaction mechanisms from a reaction energy diagram
equi036 Writing the rate law of an elementary reaction
equi037 Writing the rate law implied by a simple mechanism with an initial slow step
equi038 Expressing the concentration of an intermediate in terms of the concentration of reactants
equi039 Writing the rate law implied by a simple mechanism
equi013 Drawing the reaction energy diagram of a catalyzed reaction

Big Idea 5: Thermodynamics

thermo001 Understanding how kinetic energy scales with mass and speed
thermo051 Calculating kinetic energy
gas015 Predicting how molecular speed distribution changes with temperature and molar mass
gas016 Calculating average molecular speed
thermo003 Using conservation of energy to predict the qualitative exchange of kinetic and potential energy
thermo005 Calculating pressure-volume work
thermo006 Understanding the definitions of heat and work
thermo007 Understanding the definition of enthalpy
thermo008 Interconverting calories and joules
thermo011 Calculating specific heat capacity
thermo009 Using specific heat capacity to find heat
thermo010 Using specific heat capacity to find temperature change
thermo013 Calculating molar heat capacity
thermo017 Using heat of fusion or vaporization to find the heat needed to melt or boil a substance
thermo052 Understanding the connection between vapor pressure, boiling point, and enthalpy of vaporization
thermo053 Calculating vapor pressure from boiling point and enthalpy of vaporization
thermo054 Calculating enthalpy of vaporization from vapor pressure
thermo020 Using the general properties of reaction enthalpy
thermo014 Calculating the heat of reaction from molar reaction enthalpy and the mass of a reactant
thermo021 Using Hess's Law to calculate net reaction enthalpy
thermo022 Writing a standard formation reaction
thermo023 Calculating a molar heat of reaction from formation enthalpies
thermo043 Calculating the heat of reaction from bond energies and Lewis structures
thermo018 Calculating the heat of reaction from bond energies
soln013 Understanding conceptual components of the enthalpy of solution
thermo024 Calculating entropy change from reversible heat flow
thermo026 Calculating absolute entropy using the Boltzmann hypothesis
thermo027 Calculating entropy change using the Boltzmann hypothesis
thermo028 Predicting qualitatively how entropy changes with temperature and volume
thermo029 Predicting qualitatively how entropy changes with mixing and separation
thermo030 Qualitatively predicting reaction entropy
thermo031 Calculating reaction entropy using the standard molar entropies of reactants
thermo032 Using the general properties of Gibbs free energy
thermo033 Calculating dG from dH and dS
thermo034 Using the conditions of spontaneity to deduce the signs of ΔH and ΔS
thermo035 Calculating standard reaction free energy from standard free energies of formation
thermo037 Estimating a phase transition temperature from standard thermodynamic data

Big Idea 6: Chemical Equilibrium

equi003 Understanding that no reaction goes to 100%
equi004 Predicting relative forward and reverse rates of reaction in a dynamic equilibrium
equi041 Writing a concentration equilibrium constant expression
equi042 Writing a pressure equilibrium constant expression
equi046 Calculating an equilibrium constant from an equilibrium composition
equi045 Writing the concentration equilibrium expression for a heterogeneous equilibrium
equi044 Writing the pressure equilibrium expression for a heterogeneous equilibrium
equi043 Calculating an equilibrium constant from a heterogeneous equilibrium composition
equi008 Using an equilibrium constant to predict the direction of spontaneous reaction
equi015 Using the general properties of equilibrium constants
equi016 Setting up a reaction table
equi017 Calculating equilibrium composition from an equilibrium constant
equi005 Using Le Chatelier's Principle to predict the result of changing concentration or volume
equi006 Using Le Chatelier's Principle to predict the result of changing temperature
acid007 Understanding the difference between strong and weak acids
acid035 Identifying the major species in weak acid or weak base equilibria
acid026 Writing an acid dissociation constant expression
acid013 Interconverting hydronium and hydroxide concentration at 25°C
acid016 Interconverting pH and hydronium ion concentration
acid012 Interconverting pH and pOH at 25°C

acid018 Making qualitative estimates of pH change
acid019 Calculating the pH of a strong acid solution
acid020 Calculating the pH of a strong base solution
acid021 Diluting a strong acid solution to a given pH
acid022 Preparing a strong base solution with a given pH
acid027 Calculating the K_a of a weak acid from pH
acid028 Calculating the pH of a weak acid solution
acid029 Writing a base protonation constant expression
acid030 Calculating the pH of a weak base solution
acid031 Deriving K_b from K_a
acid042 Interconverting K_a and pK_a
acid048 Calculating the pH of a salt solution
acid036 Setting up a reaction table for a pH calculation with a common ion
acid037 Calculating the pH of a buffer
acid038 Calculating the composition of a buffer of a given pH
acid023 Determining the volume of base needed to titrate a given mass of acid
acid024 Determining the molar mass of an acid by titration
acid025 Standardizing a base solution by titration
acid040 Calculating the pH of a weak acid titrated with a strong base
acid041 Calculating the pH of a weak base titrated with a strong acid
acid043 Calculating the pH at equivalence of a titration
soln014 Writing a solubility product (K_{sp}) expression
soln015 Using K_{sp} to calculate the solubility of a compound
soln016 Using the solubility of a compound to calculate K_{sp}
soln017 Calculating the solubility of an ionic compound when a common ion is present
soln018 Understanding the effect of pH on the solubility of ionic compounds
thermo038 Calculating reaction free energy under nonstandard conditions
thermo039 Using reaction free energy to predict equilibrium composition

Advanced Material

nchem001 Interpreting the symbol for a nuclide
nchem002 Writing the symbols in a nuclear chemical equation
nchem003 Balancing a nuclear chemical equation
nchem006 Writing the equation for a typical radioactive decay
nchem008 Calculating the energy change in a nuclear reaction from the mass change
nchem004 Knowing the properties of the common types of nuclear radiation
nchem005 Understanding the common modes of radioactive decay
nchem009 Understanding radioactive half life
nchem010 Interconverting amount of radioactive decay and half life
nchem011 Calculating radioactive activity from half life
nchem012 Using isotope ratios to radiodate
nchem013 Using activity to radiodate
ichem008 Writing the formula of a metal complex from its description
ichem009 Recognizing typical metal ligands
ichem010 Determining the oxidation state of the metal in a complex ion
ichem011 Naming complex cations with one type of ligand
ichem012 Naming complex anions with one type of ligand
ichem013 Naming complex ions
ichem014 Determining the oxidation state of the metal in a coordination compound
ichem015 Naming coordination compounds
ichem016 Determining the coordination number of a metal in a complex
ichem017 Understanding the connection between geometry and coordination number of a metal complex
ichem018 Distinguishing isomers and alternate views of a metal complex
ichem019 Drawing an isomer of a metal complex
ichem020 Drawing cis and trans isomers of a metal complex
ichem023 Adding electrons to a crystal field theory energy level diagram
ichem024 Predicting color and magnetic properties from a crystal field theory energy level diagram
ichem025 Drawing a crystal field theory energy level diagram
ochem001 Identifying organic compounds

ochem003 Interpreting condensed chemical structures
ochem004 Identifying organic functional groups
ochem005 Identifying the main chain of branched alkanes
ochem006 Numbering the main chain of branched alkanes
ochem007 Interpreting condensed chemical structures with benzene rings
ochem008 Naming normal alkanes
ochem009 Using family suffixes to name organic compounds
ochem010 Naming the parent hydrocarbon of branched alkanes
ochem011 Naming alkyl side chains
ochem012 Naming branched alkanes
ochem013 Using multiplying affixes in the names of branched alkanes
ochem016 Naming unbranched alkenes and alkynes
ochem017 Naming alkenes and alkynes
ochem018 Naming alkyl halides
ochem019 Naming alcohols
ochem020 Naming aldehydes and acids
ochem021 Naming benzene derivatives

B.78 AP Chemistry (First Semester)

Math and Algebra

arith231 Integer multiplication and division
arith067 Simplifying a fraction
arith212 Equivalent fractions
arith105 Signed fraction multiplication: Advanced
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith234 Signed decimal addition and subtraction with 3 numbers
arith030 Finding a percentage of a whole number without a calculator: Basic
arith047 Evaluating expressions with exponents: Problem type 1
arith029 Ordering numbers with positive exponents
arith024 Ordering numbers with negative exponents
alge024 Introduction to the product rule of exponents
alge026 Quotient of expressions involving exponents
alge004 Evaluating a quadratic expression: Integers
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge607 Combining like terms: Integer coefficients
alge663 Combining like terms: Advanced
alge160 Algebraic symbol manipulation
alge027 Power rules with positive exponents
alge025 Power of a power rule with negative exponents
alge029 Simplifying a sum or difference of three univariate polynomials
alge030 Product rule with positive exponents: Multivariate
alge033 Multiplying binomials with leading coefficients of 1
alge032 Squaring a binomial: Univariate
alge180 Multiplication involving binomials and trinomials in two variables
alge053 Multiplying rational expressions involving multivariate monomials
alge006 Solving a two-step equation with integers
alge200 Solving an equation to find the value of an expression
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
alge214 Discriminant of a quadratic equation
alge095 Applying the quadratic formula: Exact answers
alge194 Graphing a line given its equation in slope-intercept form
alge196 Graphing a line through a given point with a given slope

alge637 Determining the slope of a line given its graph
alge210 Finding x- and y-intercepts of a line given the equation: Advanced
alge070 Writing an equation of a line given the y-intercept and another point
unit041 Volume of a cube or a rectangular prism
geom802 Circumference and area of a circle
unit841 Volume of a sphere
unit029 Volume of a cylinder

Measurement

arith082 Multiplication of a decimal by a power of ten
arith083 Division of a decimal by a power of ten
scinot101 Converting between decimal numbers and numbers written in scientific notation
scinot102 Multiplying and dividing numbers written in scientific notation
scinot103 Calculating positive powers of scientific notation
scinot007 Finding negative powers of scientific notation
unit040 Identifying SI units
unit014 Interconversion of prefixed and base SI units
unit015 Interconversion of prefixed SI units
unit016 Interconverting compound SI units
unit038 Interconverting derived SI units
unit032 Interconverting temperatures in Celsius and Kelvins
unit033 Interconverting temperatures in Celsius and Fahrenheit
unit017 Adding and subtracting simple units
unit018 Multiplying and dividing simple units
unit019 Powers and roots of powers of simple units
unit020 Forming compound units
unit021 Adding and subtracting compound units
unit022 Multiplying and dividing compound units
unit023 Powers and roots of compound units
sigfig001 Counting significant digits
sigfig002 Rounding to a given significant digit
sigfig003 Counting significant digits when measurements are added or subtracted
sigfig004 Counting significant digits when measurements are multiplied or divided
sigfig005 Adding or subtracting and multiplying or dividing measurements

Matter

atom015 Distinguishing elements and compounds
atom016 Distinguishing compounds and mixtures
atom034 Distinguishing chemical and physical change
atom033 Distinguishing solid, liquid and gas phases of a pure substance
atom001 Names and symbols of important elements
atom002 Reading a Periodic Table entry
atom042 Understanding periods and groups of the Periodic Table
atom003 Organization of the Periodic Table
atom005 Standard chemical and physical states of the elements
atom038 Using the Periodic Table to identify similar elements

Atoms, Ions and Molecules

atom039 Identifying the parts of an atom
atom006 Counting protons and electrons in atoms and atomic ions
atom029 Finding isotopic atoms
atom030 Finding isoelectronic atoms

atom012 Predicting the ions formed by common main-group elements
atom004 Isotopes
atom019 Counting valence electrons in an atomic ion
atom020 Drawing the Lewis dot diagram of a main group atom or common atomic ion
atom048 Counting the electron shells in a neutral atom
stoich006 Counting the number of atoms in a formula unit
atom045 Understanding the prefixes used in naming binary compounds
atom014 Naming binary covalent compounds
ochem001 Identifying organic compounds
ochem008 Naming normal alkanes
atom017 Predicting whether a compound is ionic or molecular
atom007 Predicting the formula of binary ionic compounds
atom008 Naming binary ionic compounds
atom028 Deducing the ions in a binary ionic compound from its empirical formula
atom013 Predicting and naming ionic compounds formed by two elements
atom036 Identifying common polyatomic ions
atom011 Predicting the formula of ionic compounds with common polyatomic ions
atom009 Naming ionic compounds with common polyatomic ions
atom035 Deducing the ions in a polyatomic ionic compound from its empirical formula
atom037 Identifying oxoanions
atom010 Naming ionic compounds with common oxoanions

Stoichiometry

stoich002 Using the Avogadro Number
stoich003 Calculating and using the molar mass of elements
stoich004 Calculating and using the molar mass of diatomic elements
stoich005 Calculating and using the molar mass of heterodiatomc compounds
stoich007 Finding mole ratios from chemical formulae
stoich008 Finding chemical formulae from a mole ratio
stoich009 Finding molar mass from chemical formulae
stoich010 Finding mass percent from chemical formulae
stoich011 Elemental analysis
rxn002 Writing a chemical equation from a description of the reaction
rxn001 Identifying combination, decomposition, single and double displacement reactions
stoich012 Stoichiometric coefficients
stoich013 Balancing chemical equations with noninterfering coefficients
stoich014 Balancing chemical equations with interfering coefficients
rxn004 Writing the net equation for a sequence of reactions
stoich015 Solving for a reactant using a chemical equation
stoich017 Limiting reactants
stoich018 Percent yield of chemical reactions
stoich020 Calculating molarity using solute moles
stoich028 Using molarity to find solute moles and solution volume
stoich029 Calculating molarity using solute mass
stoich030 Using molarity to find solute mass and solution volume
stoich021 Dilution
stoich037 Solving for a reactant in solution
stoich038 Solving limiting reactant problems in solution
stoich022 Calculating mass percent composition
stoich032 Using mass percent composition to find solution volume
soln006 Calculating molality
soln008 Calculating mole fraction

Simple Reactions

soln001 Predicting the products of dissolution
soln002 Writing net ionic equations

soln003 Predicting precipitation
rxn006 Identifying precipitation, combustion and acid-base reactions
acid002 Identifying acids and bases by their chemical formula
acid011 Predicting the products of a neutralization reaction
acid001 Identifying acids and bases by their reaction with water
acid007 Understanding the difference between strong and weak acids
acid008 Identifying Bronsted-Lowry acids and bases
acid009 Finding the conjugate of an acid or base
acid010 Predicting the products of the reaction of a strong acid with water
acid003 Naming inorganic acids
acid004 Deducing the formulae of inorganic acids from their names
acid006 Recognizing common acids and bases
redox001 Assigning oxidation numbers
redox002 Recognizing reduction and oxidation
redox003 Identifying oxidizing and reducing agents
redox004 Identifying oxidized and reduced reactants in a metal-nonmetal reaction
redox005 Identifying oxidized and reduced reactants in a single-displacement reaction
redox011 Predicting whether simple electrochemical reactions happen
redox006 Writing a simple half-reaction from its description
redox007 Writing the half-reactions of a metal-nonmetal reaction
redox008 Writing the half-reactions of a single-displacement reaction

Thermochemistry

thermo001 Understanding how kinetic energy scales with mass and speed
thermo002 Understanding how electrostatic potential energy scales with charge and separation
thermo003 Using conservation of energy to predict the qualitative exchange of kinetic and potential energy
thermo005 Calculating pressure-volume work
thermo006 Understanding the definitions of heat and work
thermo007 Understanding the definition of enthalpy
thermo008 Interconverting calories and joules
thermo011 Calculating specific heat capacity
thermo009 Using specific heat capacity to find heat
thermo010 Using specific heat capacity to find temperature change
thermo020 Using the general properties of reaction enthalpy
thermo014 Calculating the heat of reaction from molar reaction enthalpy and the mass of a reactant
thermo021 Using Hess's Law to calculate net reaction enthalpy
thermo022 Writing a standard formation reaction
thermo023 Calculating a molar heat of reaction from formation enthalpies
thermo018 Calculating the heat of reaction from bond energies

Electronic Structure

atom051 Understanding the meaning of a de Broglie wavelength
atom052 Interpreting the radial probability distribution of an orbital
atom053 Interpreting the angular probability distribution of an orbital
atom054 Recognizing s and p orbitals
atom055 Deducing n and l from a subshell label
atom056 Deciding the relative energy of electron subshells
atom057 Drawing a box diagram of the electron configuration of an atom
atom021 Deducing the allowed quantum numbers of an atomic electron
atom024 Calculating the capacity of electron subshells
atom031 Knowing the subshells of an electron shell
atom025 Interpreting the electron configuration of an atom or atomic ion
atom026 Interpreting the electron configuration of an atom or atomic ion in noble-gas notation
atom027 Writing the electron configuration of an atom or atomic ion with s and p electrons only
atom046 Understanding periodic trends in atomic size
atom047 Understanding periodic trends in atomic ionizability

atom041 Understanding the organization of the electromagnetic spectrum
atom040 Interconverting the wavelength and frequency of electromagnetic radiation
atom043 Interconverting wavelength, frequency and photon energy
atom044 Calculating the wavelength of a spectral line from an energy diagram
atom049 Predicting the qualitative features of a line spectrum
atom050 Calculating the wavelength of a line in the spectrum of hydrogen

Gases

gas001 Interconverting pressure and force
gas002 Measuring pressure in non-SI units
gas003 Understanding pressure equilibrium and atmospheric pressure
gas004 Understanding Boyle's Law
gas005 Solving applications of Boyle's Law
gas006 Using Charles's Law
gas007 Using the ideal equation of state
gas008 Interconverting molar mass and density of ideal gases
gas009 Calculating mole fraction in a gas mixture
gas010 Calculating partial pressure in a gas mixture
gas011 Solving for a gaseous reactant
gas012 Understanding how average molecular kinetic energy scales with temperature
gas013 Understanding how average molecular speed scales with temperature and molar mass
gas014 Interpreting a graph of molecular speed distribution
gas015 Predicting how molecular speed distribution changes with temperature and molar mass
gas016 Calculating average molecular speed
gas017 Understanding how molecular collision rate scales with temperature and volume
gas018 Using relative effusion rates to find an unknown molar mass

Advanced Material

thermo017 Using heat of fusion or vaporization to find the heat needed to melt or boil a substance
thermo019 Relating vapor pressure to vaporization
thermo040 Using a phase diagram to predict phase at a given temperature and pressure
thermo041 Labeling a typical simple phase diagram
thermo042 Using a phase diagram to find a phase transition temperature or pressure
soln013 Understanding conceptual components of the enthalpy of solution
soln010 Using Henry's Law to calculate the solubility of a gas
soln005 Predicting relative boiling point elevations and freezing point depressions
soln007 Using osmotic pressure to find molar mass
soln009 Using Raoult's Law to calculate the vapor pressure of a component
equi009 Predicting how reaction rate varies with pressure, concentration and temperature
equi012 Calculating the reaction rate of one reactant from that of another
equi032 Calculating average and instantaneous reaction rate from a graph of concentration versus time
equi019 Using a rate law
equi020 Using reactant reaction order to predict changes in initial rate
equi021 Deducing a rate law from initial reaction rate data
equi023 Calculating the change in concentration after a whole number of half-lives of a first-order reaction
equi022 Using an integrated rate law for a first-order reaction
equi027 Using a second-order integrated rate law to find concentration change
equi028 Using first- and second-order integrated rate laws
equi029 Deducing a rate law from the change in concentration over time
equi030 Finding half life and rate constant from a graph of concentration versus time
equi010 Interpreting a reaction energy diagram
equi011 Relating activation energy to reaction rate
equi013 Drawing the reaction energy diagram of a catalyzed reaction
equi024 Understanding the qualitative predictions of the Arrhenius equation
equi025 Using the Arrhenius equation to calculate k at one temperature from k at another
equi026 Using the Arrhenius equation to calculate E_a from k versus T data

equi003 Understanding that no reaction goes to 100%
equi004 Predicting relative forward and reverse rates of reaction in a dynamic equilibrium
equi005 Using Le Chatelier's Principle to predict the result of changing concentration or volume
equi006 Using Le Chatelier's Principle to predict the result of changing temperature
equi007 Writing an equilibrium constant expression
equi014 Writing an equilibrium constant expression for a heterogeneous equilibrium
equi008 Using an equilibrium constant to predict the direction of spontaneous reaction
equi015 Using the general properties of equilibrium constants
equi016 Setting up a reaction table
equi017 Calculating equilibrium composition from an equilibrium constant
acid032 Predicting the qualitative acid-base properties of salts
acid005 Naming acid salts
acid016 Interconverting pH and hydronium ion concentration
acid017 Using the ion product of water
acid018 Making qualitative estimates of pH change
acid019 Calculating the pH of a strong acid solution
acid020 Calculating the pH of a strong base solution
acid021 Diluting a strong acid solution to a given pH
acid022 Preparing a strong base solution with a given pH
acid026 Writing an acid dissociation constant expression
acid027 Calculating the K_a of a weak acid from pH
acid028 Calculating the pH of a weak acid solution
acid029 Writing a base protonation constant expression
acid030 Calculating the pH of a weak base solution
acid031 Deriving K_b from K_a
acid042 Interconverting K_a and pK_a
acid048 Calculating the pH of a salt solution
acid035 Identifying the major species in weak acid or weak base equilibria
acid036 Setting up a reaction table for a pH calculation with a common ion
acid037 Calculating the pH of a buffer
acid038 Calculating the composition of a buffer of a given pH
acid023 Determining the volume of base needed to titrate a given mass of acid
acid024 Determining the molar mass of an acid by titration
acid025 Standardizing a base solution by titration
acid040 Calculating the pH of a weak acid titrated with a strong base
acid041 Calculating the pH of a weak base titrated with a strong acid
acid043 Calculating the pH at equivalence of a titration
soln014 Writing a solubility product (K_{sp}) expression
soln015 Using K_{sp} to calculate the solubility of a compound
soln016 Using the solubility of a compound to calculate K_{sp}
soln017 Calculating the solubility of an ionic compound when a common ion is present
soln018 Understanding the effect of pH on the solubility of ionic compounds
thermo024 Calculating entropy change from reversible heat flow
thermo026 Calculating absolute entropy using the Boltzmann hypothesis
thermo027 Calculating entropy change using the Boltzmann hypothesis
thermo028 Predicting qualitatively how entropy changes with temperature and volume
thermo029 Predicting qualitatively how entropy changes with mixing and separation
thermo030 Qualitatively predicting reaction entropy
thermo031 Calculating reaction entropy using the standard molar entropies of reactants
thermo032 Using the general properties of Gibbs free energy
thermo033 Calculating dG from dH and dS
thermo034 Using the conditions of spontaneity to deduce the signs of ΔH and ΔS
thermo035 Calculating standard reaction free energy from standard free energies of formation
thermo036 Predicting how equilibrium shifts with temperature change
thermo037 Estimating a phase transition temperature from standard thermodynamic data
thermo038 Calculating reaction free energy under nonstandard conditions
thermo039 Using reaction free energy to predict equilibrium composition
redox009 Writing and balancing complex half-reactions in acidic solution
redox010 Writing and balancing complex half-reactions in basic solution
redox013 Balancing a complex redox equation in acidic or basic solution
redox014 Writing the half-reactions of a complex redox reaction in acidic or basic solution
redox012 Designing a galvanic cell from a single-displacement redox reaction

redox016 Designing a galvanic cell from two half-reactions
redox017 Analyzing a galvanic cell
redox018 Picking a reduction or oxidation that will make a galvanic cell work
redox019 Ranking the strength of oxidizing and reducing agents using standard reduction potentials
redox020 Calculating standard reaction free energy from standard reduction potentials
redox021 Using the Nernst equation to calculate nonstandard cell voltage
nchem001 Interpreting the symbol for a nuclide
nchem002 Writing the symbols in a nuclear chemical equation
nchem003 Balancing a nuclear chemical equation
nchem004 Knowing the properties of the common types of nuclear radiation
nchem005 Understanding the common modes of radioactive decay
nchem006 Writing the equation for a typical radioactive decay
nchem008 Calculating the energy change in a nuclear reaction from the mass change
nchem009 Understanding radioactive half life
nchem010 Interconverting amount of radioactive decay and half life
nchem011 Calculating radioactive activity from half life
nchem012 Using isotope ratios to radiodate
nchem013 Using activity to radiodate
ochem003 Interpreting condensed chemical structures
ochem004 Identifying organic functional groups
ochem005 Identifying the main chain of branched alkanes
ochem006 Numbering the main chain of branched alkanes
ochem007 Interpreting condensed chemical structures with benzene rings
ochem009 Using family suffixes to name organic compounds
ochem010 Naming the parent hydrocarbon of branched alkanes
ochem011 Naming alkyl side chains
ochem012 Naming branched alkanes
ochem013 Using multiplying affixes in the names of branched alkanes
ochem016 Naming unbranched alkenes and alkynes
ochem017 Naming alkenes and alkynes
ochem018 Naming alkyl halides
ochem019 Naming alcohols
ochem020 Naming aldehydes and acids
ochem021 Naming benzene derivatives

B.79 AP Chemistry (Second Semester)

Math and Algebra

arith231 Integer multiplication and division
arith067 Simplifying a fraction
arith212 Equivalent fractions
arith105 Signed fraction multiplication: Advanced
arith220 Decimal place value: Hundreds to ten thousandths
arith221 Rounding decimals
arith234 Signed decimal addition and subtraction with 3 numbers
arith030 Finding a percentage of a whole number without a calculator: Basic
arith047 Evaluating expressions with exponents: Problem type 1
arith029 Ordering numbers with positive exponents
arith024 Ordering numbers with negative exponents
alge024 Introduction to the product rule of exponents
alge026 Quotient of expressions involving exponents
alge004 Evaluating a quadratic expression: Integers
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge607 Combining like terms: Integer coefficients
alge663 Combining like terms: Advanced
alge160 Algebraic symbol manipulation

alge027 Power rules with positive exponents
alge025 Power of a power rule with negative exponents
alge029 Simplifying a sum or difference of three univariate polynomials
alge030 Product rule with positive exponents: Multivariate
alge033 Multiplying binomials with leading coefficients of 1
alge032 Squaring a binomial: Univariate
alge180 Multiplication involving binomials and trinomials in two variables
alge053 Multiplying rational expressions involving multivariate monomials
alge006 Solving a two-step equation with integers
alge200 Solving an equation to find the value of an expression
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
alge214 Discriminant of a quadratic equation
alge095 Applying the quadratic formula: Exact answers
alge194 Graphing a line given its equation in slope-intercept form
alge196 Graphing a line through a given point with a given slope
alge637 Determining the slope of a line given its graph
alge210 Finding x- and y-intercepts of a line given the equation: Advanced
alge070 Writing an equation of a line given the y-intercept and another point
unit041 Volume of a cube or a rectangular prism
geom802 Circumference and area of a circle
unit841 Volume of a sphere
unit029 Volume of a cylinder
arith082 Multiplication of a decimal by a power of ten
arith083 Division of a decimal by a power of ten
scinot101 Converting between decimal numbers and numbers written in scientific notation
scinot102 Multiplying and dividing numbers written in scientific notation
scinot103 Calculating positive powers of scientific notation
scinot007 Finding negative powers of scientific notation

Measurement and Matter

unit040 Identifying SI units
unit014 Interconversion of prefixed and base SI units
unit015 Interconversion of prefixed SI units
unit016 Interconverting compound SI units
unit038 Interconverting derived SI units
unit032 Interconverting temperatures in Celsius and Kelvins
unit033 Interconverting temperatures in Celsius and Fahrenheit
unit017 Adding and subtracting simple units
unit018 Multiplying and dividing simple units
unit019 Powers and roots of powers of simple units
unit020 Forming compound units
unit021 Adding and subtracting compound units
unit022 Multiplying and dividing compound units
unit023 Powers and roots of compound units
sigfig001 Counting significant digits
sigfig002 Rounding to a given significant digit
sigfig003 Counting significant digits when measurements are added or subtracted
sigfig004 Counting significant digits when measurements are multiplied or divided
sigfig005 Adding or subtracting and multiplying or dividing measurements
atom015 Distinguishing elements and compounds
atom016 Distinguishing compounds and mixtures
atom034 Distinguishing chemical and physical change
atom033 Distinguishing solid, liquid and gas phases of a pure substance
atom001 Names and symbols of important elements
atom002 Reading a Periodic Table entry
atom042 Understanding periods and groups of the Periodic Table
atom003 Organization of the Periodic Table

atom005 Standard chemical and physical states of the elements
atom038 Using the Periodic Table to identify similar elements
atom039 Identifying the parts of an atom
atom006 Counting protons and electrons in atoms and atomic ions
atom029 Finding isoprotonic atoms
atom030 Finding isoelectronic atoms
atom012 Predicting the ions formed by common main-group elements
atom004 Isotopes
atom019 Counting valence electrons in an atomic ion
atom020 Drawing the Lewis dot diagram of a main group atom or common atomic ion
atom048 Counting the electron shells in a neutral atom
stoich006 Counting the number of atoms in a formula unit
atom045 Understanding the prefixes used in naming binary compounds
atom014 Naming binary covalent compounds
atom017 Predicting whether a compound is ionic or molecular
atom007 Predicting the formula of binary ionic compounds
atom008 Naming binary ionic compounds
atom028 Deducing the ions in a binary ionic compound from its empirical formula
atom013 Predicting and naming ionic compounds formed by two elements
atom036 Identifying common polyatomic ions
atom011 Predicting the formula of ionic compounds with common polyatomic ions
atom009 Naming ionic compounds with common polyatomic ions
atom035 Deducing the ions in a polyatomic ionic compound from its empirical formula
atom037 Identifying oxoanions
atom010 Naming ionic compounds with common oxoanions

Chemical Reactions

stoich002 Using the Avogadro Number
stoich003 Calculating and using the molar mass of elements
stoich004 Calculating and using the molar mass of diatomic elements
stoich005 Calculating and using the molar mass of heterodiatomc compounds
stoich007 Finding mole ratios from chemical formulae
stoich008 Finding chemical formulae from a mole ratio
stoich009 Finding molar mass from chemical formulae
stoich010 Finding mass percent from chemical formulae
stoich011 Elemental analysis
rxn002 Writing a chemical equation from a description of the reaction
rxn001 Identifying combination, decomposition, single and double displacement reactions
stoich012 Stoichiometric coefficients
stoich013 Balancing chemical equations with noninterfering coefficients
stoich014 Balancing chemical equations with interfering coefficients
rxn004 Writing the net equation for a sequence of reactions
stoich015 Solving for a reactant using a chemical equation
stoich017 Limiting reactants
stoich018 Percent yield of chemical reactions
stoich020 Calculating molarity using solute moles
stoich028 Using molarity to find solute moles and solution volume
stoich029 Calculating molarity using solute mass
stoich030 Using molarity to find solute mass and solution volume
stoich021 Dilution
stoich037 Solving for a reactant in solution
stoich038 Solving limiting reactant problems in solution
soln001 Predicting the products of dissolution
soln002 Writing net ionic equations
soln003 Predicting precipitation
rxn006 Identifying precipitation, combustion and acid-base reactions
acid002 Identifying acids and bases by their chemical formula
acid011 Predicting the products of a neutralization reaction
redox001 Assigning oxidation numbers

redox002 Recognizing reduction and oxidation
redox003 Identifying oxidizing and reducing agents
redox004 Identifying oxidized and reduced reactants in a metal-nonmetal reaction
redox005 Identifying oxidized and reduced reactants in a single-displacement reaction
redox011 Predicting whether simple electrochemical reactions happen
thermo001 Understanding how kinetic energy scales with mass and speed
thermo002 Understanding how electrostatic potential energy scales with charge and separation
thermo003 Using conservation of energy to predict the qualitative exchange of kinetic and potential energy
thermo005 Calculating pressure-volume work
thermo006 Understanding the definitions of heat and work
thermo007 Understanding the definition of enthalpy
thermo008 Interconverting calories and joules
thermo011 Calculating specific heat capacity
thermo009 Using specific heat capacity to find heat
thermo010 Using specific heat capacity to find temperature change
thermo020 Using the general properties of reaction enthalpy
thermo014 Calculating the heat of reaction from molar reaction enthalpy and the mass of a reactant
thermo021 Using Hess's Law to calculate net reaction enthalpy
thermo022 Writing a standard formation reaction
thermo023 Calculating a molar heat of reaction from formation enthalpies
thermo018 Calculating the heat of reaction from bond energies

Structure and Bonding

atom051 Understanding the meaning of a de Broglie wavelength
atom052 Interpreting the radial probability distribution of an orbital
atom053 Interpreting the angular probability distribution of an orbital
atom054 Recognizing s and p orbitals
atom055 Deducing n and l from a subshell label
atom056 Deciding the relative energy of electron subshells
atom057 Drawing a box diagram of the electron configuration of an atom
atom021 Deducing the allowed quantum numbers of an atomic electron
atom024 Calculating the capacity of electron subshells
atom031 Knowing the subshells of an electron shell
atom025 Interpreting the electron configuration of an atom or atomic ion
atom026 Interpreting the electron configuration of an atom or atomic ion in noble-gas notation
atom027 Writing the electron configuration of an atom or atomic ion with s and p electrons only
atom046 Understanding periodic trends in atomic size
atom047 Understanding periodic trends in atomic ionizability
atom041 Understanding the organization of the electromagnetic spectrum
atom040 Interconverting the wavelength and frequency of electromagnetic radiation
atom043 Interconverting wavelength, frequency and photon energy
atom044 Calculating the wavelength of a spectral line from an energy diagram
atom049 Predicting the qualitative features of a line spectrum
atom050 Calculating the wavelength of a line in the spectrum of hydrogen

Gases, Liquids and Solids

gas001 Interconverting pressure and force
gas002 Measuring pressure in non-SI units
gas003 Understanding pressure equilibrium and atmospheric pressure
gas004 Understanding Boyle's Law
gas005 Solving applications of Boyle's Law
gas006 Using Charles's Law
gas007 Using the ideal equation of state
gas008 Interconverting molar mass and density of ideal gases
gas009 Calculating mole fraction in a gas mixture
gas010 Calculating partial pressure in a gas mixture

gas011 Solving for a gaseous reactant
gas012 Understanding how average molecular kinetic energy scales with temperature
gas013 Understanding how average molecular speed scales with temperature and molar mass
gas014 Interpreting a graph of molecular speed distribution
gas015 Predicting how molecular speed distribution changes with temperature and molar mass
gas016 Calculating average molecular speed
gas017 Understanding how molecular collision rate scales with temperature and volume
gas018 Using relative effusion rates to find an unknown molar mass
thermo017 Using heat of fusion or vaporization to find the heat needed to melt or boil a substance
thermo019 Relating vapor pressure to vaporization
thermo040 Using a phase diagram to predict phase at a given temperature and pressure
thermo041 Labeling a typical simple phase diagram
thermo042 Using a phase diagram to find a phase transition temperature or pressure

Solutions

stoich022 Calculating mass percent composition
stoich032 Using mass percent composition to find solution volume
soln006 Calculating molality
soln008 Calculating mole fraction
soln013 Understanding conceptual components of the enthalpy of solution
soln010 Using Henry's Law to calculate the solubility of a gas
soln005 Predicting relative boiling point elevations and freezing point depressions
soln007 Using osmotic pressure to find molar mass
soln009 Using Raoult's Law to calculate the vapor pressure of a component

Kinetics and Equilibrium

equi009 Predicting how reaction rate varies with pressure, concentration and temperature
equi012 Calculating the reaction rate of one reactant from that of another
equi032 Calculating average and instantaneous reaction rate from a graph of concentration versus time
equi019 Using a rate law
equi020 Using reactant reaction order to predict changes in initial rate
equi021 Deducing a rate law from initial reaction rate data
equi023 Calculating the change in concentration after a whole number of half-lives of a first-order reaction
equi022 Using an integrated rate law for a first-order reaction
equi027 Using a second-order integrated rate law to find concentration change
equi028 Using first- and second-order integrated rate laws
equi029 Deducing a rate law from the change in concentration over time
equi030 Finding half life and rate constant from a graph of concentration versus time
equi010 Interpreting a reaction energy diagram
equi011 Relating activation energy to reaction rate
equi013 Drawing the reaction energy diagram of a catalyzed reaction
equi024 Understanding the qualitative predictions of the Arrhenius equation
equi025 Using the Arrhenius equation to calculate k at one temperature from k at another
equi026 Using the Arrhenius equation to calculate E_a from k versus T data
equi003 Understanding that no reaction goes to 100%
equi004 Predicting relative forward and reverse rates of reaction in a dynamic equilibrium
equi005 Using Le Chatelier's Principle to predict the result of changing concentration or volume
equi006 Using Le Chatelier's Principle to predict the result of changing temperature
equi007 Writing an equilibrium constant expression
equi014 Writing an equilibrium constant expression for a heterogeneous equilibrium
equi008 Using an equilibrium constant to predict the direction of spontaneous reaction
equi015 Using the general properties of equilibrium constants
equi016 Setting up a reaction table
equi017 Calculating equilibrium composition from an equilibrium constant

Acids and Bases

acid001 Identifying acids and bases by their reaction with water
acid007 Understanding the difference between strong and weak acids
acid008 Identifying Bronsted-Lowry acids and bases
acid009 Finding the conjugate of an acid or base
acid010 Predicting the products of the reaction of a strong acid with water
acid032 Predicting the qualitative acid-base properties of salts
acid003 Naming inorganic acids
acid004 Deducing the formulae of inorganic acids from their names
acid005 Naming acid salts
acid006 Recognizing common acids and bases
acid016 Interconverting pH and hydronium ion concentration
acid017 Using the ion product of water
acid018 Making qualitative estimates of pH change
acid019 Calculating the pH of a strong acid solution
acid020 Calculating the pH of a strong base solution
acid021 Diluting a strong acid solution to a given pH
acid022 Preparing a strong base solution with a given pH
acid026 Writing an acid dissociation constant expression
acid027 Calculating the K_a of a weak acid from pH
acid028 Calculating the pH of a weak acid solution
acid029 Writing a base protonation constant expression
acid030 Calculating the pH of a weak base solution
acid031 Deriving K_b from K_a
acid042 Interconverting K_a and pK_a
acid048 Calculating the pH of a salt solution
acid035 Identifying the major species in weak acid or weak base equilibria
acid036 Setting up a reaction table for a pH calculation with a common ion
acid037 Calculating the pH of a buffer
acid038 Calculating the composition of a buffer of a given pH
acid023 Determining the volume of base needed to titrate a given mass of acid
acid024 Determining the molar mass of an acid by titration
acid025 Standardizing a base solution by titration
acid040 Calculating the pH of a weak acid titrated with a strong base
acid041 Calculating the pH of a weak base titrated with a strong acid
acid043 Calculating the pH at equivalence of a titration
soln014 Writing a solubility product (K_{sp}) expression
soln015 Using K_{sp} to calculate the solubility of a compound
soln016 Using the solubility of a compound to calculate K_{sp}
soln017 Calculating the solubility of an ionic compound when a common ion is present
soln018 Understanding the effect of pH on the solubility of ionic compounds

Entropy and Free Energy

thermo024 Calculating entropy change from reversible heat flow
thermo026 Calculating absolute entropy using the Boltzmann hypothesis
thermo027 Calculating entropy change using the Boltzmann hypothesis
thermo028 Predicting qualitatively how entropy changes with temperature and volume
thermo029 Predicting qualitatively how entropy changes with mixing and separation
thermo030 Qualitatively predicting reaction entropy
thermo031 Calculating reaction entropy using the standard molar entropies of reactants
thermo032 Using the general properties of Gibbs free energy
thermo033 Calculating dG from dH and dS
thermo034 Using the conditions of spontaneity to deduce the signs of ΔH and ΔS
thermo035 Calculating standard reaction free energy from standard free energies of formation
thermo036 Predicting how equilibrium shifts with temperature change
thermo037 Estimating a phase transition temperature from standard thermodynamic data
thermo038 Calculating reaction free energy under nonstandard conditions

thermo039 Using reaction free energy to predict equilibrium composition

Electrochemistry

redox006 Writing a simple half-reaction from its description
redox007 Writing the half-reactions of a metal-nonmetal reaction
redox008 Writing the half-reactions of a single-displacement reaction
redox009 Writing and balancing complex half-reactions in acidic solution
redox010 Writing and balancing complex half-reactions in basic solution
redox013 Balancing a complex redox equation in acidic or basic solution
redox014 Writing the half-reactions of a complex redox reaction in acidic or basic solution
redox012 Designing a galvanic cell from a single-displacement redox reaction
redox016 Designing a galvanic cell from two half-reactions
redox017 Analyzing a galvanic cell
redox018 Picking a reduction or oxidation that will make a galvanic cell work
redox019 Ranking the strength of oxidizing and reducing agents using standard reduction potentials
redox020 Calculating standard reaction free energy from standard reduction potentials
redox021 Using the Nernst equation to calculate nonstandard cell voltage

Nuclear and Organic Chemistry

nchem001 Interpreting the symbol for a nuclide
nchem002 Writing the symbols in a nuclear chemical equation
nchem003 Balancing a nuclear chemical equation
nchem006 Writing the equation for a typical radioactive decay
nchem008 Calculating the energy change in a nuclear reaction from the mass change
nchem004 Knowing the properties of the common types of nuclear radiation
nchem005 Understanding the common modes of radioactive decay
nchem009 Understanding radioactive half life
nchem010 Interconverting amount of radioactive decay and half life
nchem011 Calculating radioactive activity from half life
nchem012 Using isotope ratios to radiodate
nchem013 Using activity to radiodate
ochem001 Identifying organic compounds
ochem003 Interpreting condensed chemical structures
ochem004 Identifying organic functional groups
ochem005 Identifying the main chain of branched alkanes
ochem006 Numbering the main chain of branched alkanes
ochem007 Interpreting condensed chemical structures with benzene rings
ochem008 Naming normal alkanes
ochem009 Using family suffixes to name organic compounds
ochem010 Naming the parent hydrocarbon of branched alkanes
ochem011 Naming alkyl side chains
ochem012 Naming branched alkanes
ochem013 Using multiplying affixes in the names of branched alkanes
ochem016 Naming unbranched alkenes and alkynes
ochem017 Naming alkenes and alkynes
ochem018 Naming alkyl halides
ochem019 Naming alcohols
ochem020 Naming aldehydes and acids
ochem021 Naming benzene derivatives

B.80 Math Review for AP Calculus

Real Numbers

arith067 Simplifying a fraction
arith092 Using a common denominator to order fractions
arith230 Addition or subtraction of fractions with different denominators
arith053 Fraction multiplication
arith022 Fraction division
arith100 Fractional part of a circle
arith226 Converting between percentages and decimals
arith698 Applying the percent equation
arith074 Finding the sale price without a calculator given the original price and percent discount
arith031 Finding the original price given the sale price and percent discount
arith225 Finding the percentage increase or decrease: Advanced
arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
alge272 Solving a proportion of the form $x/a = b/c$
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
arith108 Integer addition: Problem type 2
arith690 Integer subtraction: Problem type 3
arith116 Signed fraction addition or subtraction: Basic
arith106 Signed fraction addition or subtraction: Advanced
arith234 Signed decimal addition and subtraction with 3 numbers
arith231 Integer multiplication and division
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
arith071 Absolute value of a number
arith104 Operations with absolute value: Problem type 2
alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
alge187 Properties of addition
alge188 Properties of real numbers

Equations and Inequalities

alge010 Additive property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge006 Solving a two-step equation with integers
alge208 Solving a two-step equation with signed fractions
alge200 Solving an equation to find the value of an expression
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
alge742 Solving equations with zero, one, or infinitely many solutions
alge743 Algebraic symbol manipulation: Problem type 1
alge744 Algebraic symbol manipulation: Problem type 2
alge014 Solving a word problem with two unknowns using a linear equation
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge704 Solving a fraction word problem using a linear equation with the variable on both sides

alge794 Solving a value mixture problem using a linear equation
 alge020 Solving a linear inequality: Problem type 2
 alge021 Solving a linear inequality: Problem type 3
 alge207 Solving a linear inequality: Problem type 4
 alge166 Graphing a compound inequality on the number line
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge747 Solving a compound linear inequality: Interval notation
 alge729 Writing a multi-step inequality for a real-world situation
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge270 Solving an absolute value equation of the form $a-x = b$ or $-x+a = b$
 alge103 Solving an absolute value equation of the form $-ax+b = c$
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 alge170 Solving an absolute value inequality: Basic

Exponents and Polynomials

alge790 Evaluating expressions with exponents of zero
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge028 Product rule with negative exponents
 alge026 Quotient of expressions involving exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge754 Introduction to the power rules of exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge756 Power and product rules with positive exponents
 alge757 Power, product, and quotient rules with negative exponents
 arith036 Scientific notation with positive exponent
 arith037 Scientific notation with negative exponent
 scinot002 Multiplying and dividing numbers written in scientific notation
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge663 Combining like terms: Advanced
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge764 Multiplying conjugate binomials: Univariate
 alge032 Squaring a binomial: Univariate
 alge180 Multiplication involving binomials and trinomials in two variables
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge705 Factoring a quadratic with leading coefficient 1
 alge040 Factoring a quadratic with leading coefficient greater than 1
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge624 Factoring a difference of squares
 alge038 Factoring a polynomial by grouping: Problem type 1
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes
 alge681 Solving an equation written in factored form
 alge045 Finding the roots of a quadratic equation with leading coefficient 1

alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge163 Writing a quadratic equation given the roots and the leading coefficient
 alge703 Solving a word problem using a quadratic equation with rational roots
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge784 Solving a quadratic inequality written in factored form
 alge771 Solving a quadratic inequality

Lines and Systems

alge067 Plotting a point in the coordinate plane
 alge066 Finding a solution to a linear equation in two variables
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge197 Graphing a line given its x- and y-intercepts
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge198 Graphing a vertical or horizontal line
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge684 Finding slope given the graph of a line on a grid
 alge685 Finding slope given two points on the line
 alge631 Finding the slope of a line given its equation
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge725 Graphically solving a system of linear equations
 alge751 Solving a system of linear equations using substitution
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge752 Solving a 2x2 system of linear equations that is inconsistent or consistent dependent
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge184 Solving a value mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge079 Graphing a system of two linear inequalities: Basic

Functions and Graphs

set001 Set builder notation
 set002 Union and intersection of finite sets

set004 Set builder and interval notation
 set005 Union and intersection of intervals
 fun032 Identifying functions from relations
 fun010 Vertical line test
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 pcalc682 Evaluating functions: Absolute value, rational, radical
 fun030 Evaluating a piecewise-defined function
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun016 Domain and range from ordered pairs
 pcalc761 Finding inputs and outputs of a function from its graph
 pcalc750 Finding intercepts of a nonlinear function given its graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function
 alge185 Writing an equation for a function after a vertical translation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 alge252 Graphing a parabola of the form $y = ax^2$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc762 Range of a quadratic function
 alge702 Classifying the graph of a function
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge168 Graphing an absolute value equation in the plane: Advanced
 fun031 Graphing a piecewise-defined function: Problem type 1
 pcalc764 Finding zeros of a polynomial function written in factored form
 pcalc765 Finding x- and y-intercepts given a polynomial function
 pcalc782 Determining the end behavior of the graph of a polynomial function
 pcalc738 Inferring properties of a polynomial function from its graph
 pcalc795 Using a graphing calculator to find zeros of a polynomial function
 pcalc704 Using a graphing calculator to solve a word problem involving a polynomial of degree 3
 pcalc794 Using a graphing calculator to find local extrema of a polynomial function
 pcalc115 Using a graphing calculator to solve a word problem involving a local extremum of a polynomial function
 fun019 Sum, difference, and product of two functions
 alge786 Quotient of two functions: Basic
 fun022 Composition of two functions: Basic
 alge129 Composition of two functions: Advanced
 fun011 Horizontal line test
 pcalc777 Determining whether two functions are inverses of each other
 fun012 Inverse functions: Linear, discrete
 alge130 Inverse functions: Rational

Rational Expressions

alge715 Domain of a rational function: Excluded values
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge034 Simplifying a ratio of multivariate polynomials
 alge059 Ordering fractions with variables
 alge053 Multiplying rational expressions involving multivariate monomials
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1

alge054 Dividing rational expressions involving multivariate monomials
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 arith695 Complex fraction without variables: Problem type 1
 arith696 Complex fraction without variables: Problem type 2
 alge058 Complex fraction involving multivariate monomials
 alge767 Complex fraction: GCF and quadratic factoring
 alge768 Complex fraction made of sums involving rational expressions
 alge759 Dividing a polynomial by a monomial: Univariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 pcalc812 Partial fraction decomposition with distinct linear factors
 pcalc813 Partial fraction decomposition with repeated linear factors
 pcalc814 Partial fraction decomposition with an irreducible quadratic factor
 pcalc681 Writing an equation that models variation
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation
 alge772 Word problem on combined variation
 alge220 Word problem on inverse proportions
 arith612 Word problem involving multiple rates
 pcalc815 Sketching the graph of a rational function: Constant over linear
 pcalc816 Sketching the graph of a rational function: Linear over linear
 pcalc819 Sketching the graph of a rational function: Quadratic over linear
 pcalc792 Graphing rational functions with holes

Radical Expressions

pcalc763 Domain of a square root function: Advanced
 pcalc781 Graphing a square root function
 arith601 Square root of a rational perfect square
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 alge264 Square root of a perfect square monomial
 alge080 Simplifying a radical expression with an even exponent
 alge275 Simplifying a radical expression with two variables
 alge273 Simplifying a higher root of a whole number
 alge811 Simplifying a higher radical expression: Multivariate
 arith032 Square root addition or subtraction
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge086 Rationalizing the denominator of a radical expression
 alge088 Rationalizing the denominator of a radical expression using conjugates
 alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
 alge812 Converting between radical form and exponent form
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base

alge251 Rational exponents: Negative exponents and fractional bases
 alge773 Rational exponents: Products and quotients with negative exponents
 alge249 Rational exponents: Powers of powers with negative exponents
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge091 Solving a radical equation that simplifies to a quadratic equation: One radical
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge778 Using i to rewrite square roots of negative numbers
 alge779 Simplifying a product and quotient involving square roots of negative numbers
 pcalc048 Adding or subtracting complex numbers
 pcalc049 Multiplying complex numbers
 pcalc050 Dividing complex numbers
 pcalc053 Simplifying a power of i
 pcalc051 Solving a quadratic equation with complex roots

Exponentials and Logarithms

alge108 Converting between logarithmic and exponential equations
 pcalc799 Converting between natural logarithmic and exponential equations
 alge232 Evaluating a logarithmic expression
 pcalc708 Basic properties of logarithms
 pcalc779 Expanding a logarithmic expression: Problem type 1
 alge787 Writing an expression as a single logarithm
 pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 alge233 Solving an equation of the form $\log_b a = c$
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 pcalc803 Solving a multi-step equation involving a single logarithm
 pcalc804 Solving a multi-step equation involving natural logarithms
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 alge112 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 alge789 Solving exponential equations by using logarithms and natural logarithms: Decimal answers
 pcalc798 Evaluating an exponential function that models a real-world situation
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc614 Finding the initial or final amount in a word problem on exponential growth or decay
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 pcalc797 The graph, domain, and range of an exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^{x-b} + c$
 pcalc800 The graph, domain, and range of a logarithmic function
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc102 Translating the graph of a logarithmic or exponential function

Geometry

geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom340 Area of a piecewise rectangular figure
 geom351 Areas of rectangles with the same perimeter
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom022 Area of a parallelogram
 geom801 Area of a triangle
 geom802 Circumference and area of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference

geom301 Perimeter involving rectangles and circles
 geom838 Circumference ratios
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom311 Volume of a rectangular prism
 geom035 Volume of a cylinder
 geom086 Volume of a cone: Exact answers in terms of π
 geom841 Volume of a sphere
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom133 Ratio of volumes
 geom031 Surface area of a cube or a rectangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of π
 geom037 Similar polygons
 geom337 Indirect measurement
 geom044 Pythagorean Theorem
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane
 pcalc605 Graphing a circle given its equation in standard form
 pcalc064 Graphing a circle given its equation in general form
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter

Trigonometry

pcalc002 Converting between degree and radian measure: Problem type 1
 pcalc006 Sketching an angle in standard position
 pcalc626 Reference angles: Problem type 1
 pcalc622 Coterminal angles
 pcalc005 Arc length and central angle measure
 pcalc623 Area of a sector of a circle
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc008 Finding trigonometric ratios given a right triangle
 pcalc642 Solving a right triangle
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc033 Solving a triangle with the law of cosines
 pcalc627 Finding coordinates on the unit circle for special angles
 pcalc629 Trigonometric functions and special angles: Problem type 1
 pcalc630 Trigonometric functions and special angles: Problem type 2
 pcalc631 Trigonometric functions and special angles: Problem type 3
 pcalc011 Finding values of trigonometric functions given information about an angle: Problem type 1
 pcalc012 Finding values of trigonometric functions given information about an angle: Problem type 2
 pcalc013 Finding values of trigonometric functions given information about an angle: Problem type 3
 pcalc633 Amplitude and period of sine and cosine functions
 pcalc634 Amplitude, period, and phase shift of sine and cosine functions
 pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
 pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
 pcalc016 Values of inverse trigonometric functions
 pcalc018 Composition of a trigonometric function with its inverse trigonometric function: Problem type 1
 pcalc019 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 2
 pcalc036 Composition of a trigonometric function with the inverse of another trigonometric function: Problem type 3
 pcalc648 Simplifying trigonometric expressions
 pcalc666 Using cofunction identities
 pcalc029 Sum and difference identities: Problem type 1

pcalc663 Sum and difference identities: Problem type 2
 pcalc030 Double-angle identities: Problem type 1
 pcalc667 Double-angle identities: Problem type 2
 pcalc124 Product-to-sum and sum-to-product identities: Problem type 1
 pcalc650 Finding solutions in an interval for a basic equation involving sine or cosine
 pcalc651 Finding solutions in an interval for a basic tangent, cotangent, secant, or cosecant equation
 pcalc654 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 1
 pcalc020 Solving a basic trigonometric equation involving sine or cosine
 pcalc021 Solving a basic trigonometric equation involving tangent, cotangent, secant, or cosecant
 pcalc055 Plotting a point in polar coordinates
 pcalc056 Converting rectangular coordinates to polar coordinates: Special angles
 pcalc057 Converting polar coordinates to rectangular coordinates
 pcalc058 Converting an equation written in rectangular form to one written in polar form
 pcalc059 Converting an equation written in polar form to one written in rectangular coordinates

Limits and Continuity

pcalc901 Estimating a limit numerically
 pcalc902 Finding limits from a graph
 pcalc904 Finding limits for a piecewise-defined function
 pcalc905 Finding a limit by using the limit laws: Problem type 1
 pcalc906 Finding a limit by using the limit laws: Problem type 2
 pcalc907 Finding a limit by using the limit laws: Problem type 3
 pcalc911 Squeeze Theorem
 pcalc903 Determining points of discontinuity from a graph
 pcalc914 Determining a parameter to make a function continuous
 pcalc910 Limits at infinity and graphs
 pcalc908 Limits at infinity and rational functions
 pcalc915 Infinite limits and graphs
 pcalc909 Infinite limits and rational functions
 pcalc913 Finding a limit of a trigonometric function by using continuity
 pcalc912 Finding a limit by using special trigonometric limits

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Arithmetic

arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith108 Integer addition: Problem type 2
 arith107 Integer subtraction
 arith231 Integer multiplication and division
 arith071 Absolute value of a number
 arith104 Operations with absolute value: Problem type 2
 arith212 Equivalent fractions
 arith067 Simplifying a fraction
 arith618 Addition or subtraction of fractions with the same denominator
 arith230 Addition or subtraction of fractions with different denominators
 arith116 Signed fraction addition or subtraction: Basic
 arith106 Signed fraction addition or subtraction: Advanced
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith105 Signed fraction multiplication: Advanced

arith022 Fraction division
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith220 Decimal place value: Hundreds to ten thousandths
 arith078 Rounding to tens or hundreds
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith221 Rounding decimals
 arith082 Multiplication of a decimal by a power of ten
 arith083 Division of a decimal by a power of ten
 arith222 Converting a fraction to a terminating decimal
 arith089 Converting a fraction to a repeating decimal
 arith223 Converting a mixed number to a decimal
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith226 Converting between percentages and decimals
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith686 Writing a ratio as a percentage
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 mstat001 Mean of a data set
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith604 Estimating a product or quotient of whole numbers
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data

Linear Equations and Applications

alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge607 Combining like terms: Integer coefficients
 alge016 Translating a sentence into a one-step equation
 alge602 Writing a one-step variable expression for a real-world situation
 alge009 Additive property of equality with whole numbers
 alge010 Additive property of equality with integers
 alge266 Additive property of equality with a negative coefficient
 alge008 Multiplicative property of equality with whole numbers
 alge012 Multiplicative property of equality with signed fractions
 alge006 Solving a two-step equation with integers
 alge208 Solving a two-step equation with signed fractions
 alge200 Solving an equation to find the value of an expression
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge103 Solving an absolute value equation of the form $-ax+b = c$
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers

alge218 Solving a word problem involving rates and time conversion
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 alge014 Solving a word problem with two unknowns using a linear equation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge175 Word problem on direct variation
 alge176 Word problem on inverse variation

Lines and Systems of Linear Equations

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge197 Graphing a line given its x- and y-intercepts
 alge198 Graphing a vertical or horizontal line
 alge194 Graphing a line given its equation in slope-intercept form
 alge195 Graphing a line given its equation in standard form
 alge196 Graphing a line through a given point with a given slope
 alge018 Graphing a linear inequality in the plane: Standard form
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 mstat007 Interpreting a line graph
 alge734 Understanding distance and speed graphs
 alge066 Finding a solution to a linear equation in two variables
 alge069 Finding the y-intercept of a line given its equation
 alge210 Finding x- and y-intercepts of a line given the equation: Advanced
 alge637 Determining the slope of a line given its graph
 alge631 Finding the slope of a line given its equation
 alge073 Writing the equations of vertical and horizontal lines through a given point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge071 Writing the equation of a line given the slope and a point on the line
 alge072 Writing the equation of the line through two given points
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge216 Determining whether given points lie on one, both, or neither of 2 lines given equations
 alge725 Graphically solving a system of linear equations
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge079 Graphing a system of two linear inequalities: Basic

Exponents and Radicals

arith047 Evaluating expressions with exponents: Problem type 1
 arith049 Evaluating expressions with exponents: Problem type 2
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith029 Ordering numbers with positive exponents
 arith024 Ordering numbers with negative exponents
 alge024 Introduction to the product rule of exponents
 alge030 Product rule with positive exponents: Multivariate
 alge026 Quotient of expressions involving exponents
 alge028 Product rule with negative exponents
 alge027 Power rules with positive exponents
 alge025 Power of a power rule with negative exponents
 alge037 Greatest common factor of two multivariate monomials
 alge004 Evaluating a quadratic expression: Integers
 arith683 Power of 10: Positive exponent
 arith036 Scientific notation with positive exponent
 arith684 Power of 10: Negative exponent
 arith037 Scientific notation with negative exponent

scinot002 Multiplying and dividing numbers written in scientific notation
 scinot003 Finding powers of numbers written in scientific notation
 scinot004 Order of magnitude estimation
 alge663 Combining like terms: Advanced
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge033 Multiplying binomials with leading coefficients of 1
 alge032 Squaring a binomial: Univariate
 alge180 Multiplication involving binomials and trinomials in two variables
 alge705 Factoring a quadratic with leading coefficient 1
 alge624 Factoring a difference of squares
 alge038 Factoring a polynomial by grouping: Problem type 1
 arith016 Square root of a perfect square
 arith093 Simplifying the square root of a whole number less than 100
 alge080 Simplifying a radical expression with an even exponent
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 arith039 Square root multiplication: Advanced
 alge640 Simplifying a product of radical expressions: Multivariate
 alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge086 Rationalizing the denominator of a radical expression
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases

Quadratic, Rational and Exponential Expressions

alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge095 Applying the quadratic formula: Exact answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge049 Restriction on a variable in a denominator: Linear
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge058 Complex fraction involving multivariate monomials
 alge162 Complex fraction that contains a complex fraction
 alge053 Multiplying rational expressions involving multivariate monomials
 alge054 Dividing rational expressions involving multivariate monomials
 alge055 Least common multiple of two monomials
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge057 Adding rational expressions with different denominators: ax , bx
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge622 Adding rational expressions with different denominators: $x+a$, $x+b$
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge160 Algebraic symbol manipulation
 alge252 Graphing a parabola of the form $y = ax^2$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^{x-b} + c$
 alge108 Converting between logarithmic and exponential equations
 alge232 Evaluating a logarithmic expression
 pcalc708 Basic properties of logarithms
 pcalc104 Graphing a logarithmic function: Advanced

Geometry

geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom340 Area of a piecewise rectangular figure
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom801 Area of a triangle
 geom022 Area of a parallelogram
 geom016 Circumference of a circle
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom802 Circumference and area of a circle
 geom302 Area involving rectangles and circles
 geom805 Arc length and area of a sector of a circle
 geom031 Surface area of a cube or a rectangular prism
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere
 geom311 Volume of a rectangular prism
 geom035 Volume of a cylinder
 geom841 Volume of a sphere
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom133 Ratio of volumes
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom303 Acute, obtuse, and right angles
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom039 Finding supplementary and complementary angles
 geom500 Solving equations involving vertical angles and linear pairs
 geom306 Acute, obtuse, and right triangles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom044 Pythagorean Theorem
 geom038 Similar right triangles
 geom337 Indirect measurement
 alge132 Distance between two points in the plane: Exact answers
 alge191 Midpoint of a line segment in the plane

Trigonometry and Vectors

pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc002 Converting between degree and radian measure: Problem type 1
 pcalc006 Sketching an angle in standard position
 pcalc603 Common angles and trigonometric functions
 pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
 pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
 pcalc014 Sketching the graph of $y = a \sin(bx+c)$ or $y = a \cos(bx+c)$
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 pcalc061 Scalar multiplication of a vector: Algebraic approach
 pcalc062 Addition and subtraction of vectors: Algebraic approach
 vector008 Linear combination of vectors: Component form

pcalc063 Translation of a vector
pcalc060 Magnitude of a vector given in component form
vector002 Finding the magnitude and direction of a vector given its graph
vector009 Dot product of vectors given in component form
pcalc730 Finding the angle between two vectors given in component form
vector010 Using the dot product to find perpendicular vectors
vector005 Finding the components of a vector given its graph
vector006 Finding the component of a vector along another vector
vector011 Finding magnitudes of forces related to a sum of three vectors
vector012 Finding magnitudes of forces related to an object suspended by cables

B.82 Fundamentals of Accounting (Corp)

Basic Terminology

acct001 Information classification into assets, liabilities, and change of equity
acct002 Information classification into revenue, expense, or other
acct003 Account classification into financial statements
acct004 Information classification into financial statements
acct007 Components of annual report

Basic Transactions and Financial Statements

acct005 Effects of a transaction on assets, liabilities, and equity
acct008 Balancing the basic accounting equation
acct009 Changes to stockholders' equity: Problem type 1
acct010 Changes to stockholders' equity: Problem type 2
acct011 Completing a corporate balance sheet
acct012 Completing an income statement
acct013 Completing a retained earnings statement
acct014 Effect of transactions on accounts
acct301 Creating a basic income statement
acct302 Creating a basic equity statement
acct303 Creating a basic balance sheet
acct304 Basic tabular transaction

Journal Entries

acct016 Normal account balances
acct017 Trial balance errors
acct018 Basic journal entry with the step-through method
acct019 Journalization of transactions
acct020 Ending balances of accounts

Adjusting Entries

acct021 Adjusting entry calculations
acct022 Adjusting entries: Accruals
acct023 Adjusting entries with deferrals: Problem type 1
acct024 Adjusting entries with deferrals: Problem type 2

acctn025 Property, plant, and equipment section of a balance sheet: Basic problem
acctn026 Effects of adjusting entries on financial statements: Problem type 1
acctn027 Effects of adjusting entries on financial statements: Problem type 2

Closing Process and Financial Statements

acctn028 Permanent and temporary accounts
acctn029 Closing entries
acctn030 Effects of closing entries on account balances
acctn031 Correcting entries
acctn032 Reversing entries: Selecting which entries should be reversed
acctn033 Reversing entries: Preparing a reversing entry
acctn034 Creating a balance sheet with asset depreciation
acctn305 Balance sheet subtotals
acctn307 Balance sheet classification

Merchandising Accounting

acctn036 Normal account balances for a retail company
acctn037 Account classification for a retail company
acctn038 Parts of the retail income statement
acctn039 Merchandising: Computing amount due
acctn040 Merchandising: Computing income statement amounts
acctn044 Merchandising: Closing entries
acctn041 Seller's retail entries: Problem type 1
acctn042 Seller's retail entries: Problem type 2
acctn046 Seller's retail entries: Problem type 3
acctn043 Buyer's retail entries: Problem type 1
acctn045 Buyer's retail entries: Problem type 2
acctn047 Buyer's retail entries: Problem type 3
acctn048 Preparing a retail income statement

Advanced Review Topics

acctn054 Cash and cash equivalents
acctn078 Inventory costs
acctn092 Income statement with periodic inventory: Problem type 2
acctn095 Income statement with periodic inventory: Problem type 3
acctn111 Scrapping an asset
acctn112 Selling an asset
acctn141 Revenue recognition: Basic questions

B.83 Fundamentals of Accounting (Sole)

Basic Terminology

acctn001 Information classification into assets, liabilities, and change of equity
acctn002 Information classification into revenue, expense, or other
acctn003 Account classification into financial statements
acctn004 Information classification into financial statements
acctn007 Components of annual report

Basic Transactions and Financial Statements

accnt005 Effects of a transaction on assets, liabilities, and equity
accnt008 Balancing the basic accounting equation
accnt009 Changes to owner's equity: Problem type 1
accnt010 Changes to owner's equity: Problem type 2
accnt011 Completing a sole proprietorship balance sheet
accnt012 Completing an income statement
accnt013 Completing an owner's equity statement
accnt014 Effect of transactions on accounts
accnt301 Creating a basic income statement
accnt302 Creating a basic equity statement
accnt303 Creating a basic balance sheet
accnt304 Basic tabular transaction

Journal Entries

accnt016 Normal account balances
accnt017 Trial balance errors
accnt018 Basic journal entry with the step-through method
accnt019 Journalization of transactions
accnt020 Ending balances of accounts

Adjusting Entries

accnt021 Adjusting entry calculations
accnt022 Adjusting entries: Accruals
accnt023 Adjusting entries with deferrals: Problem type 1
accnt024 Adjusting entries with deferrals: Problem type 2
accnt025 Property, plant, and equipment section of a balance sheet: Basic problem
accnt026 Effects of adjusting entries on financial statements: Problem type 1
accnt027 Effects of adjusting entries on financial statements: Problem type 2

Closing Process and Financial Statements

accnt028 Permanent and temporary accounts
accnt029 Closing entries
accnt030 Effects of closing entries on account balances
accnt031 Correcting entries
accnt032 Reversing entries: Selecting which entries should be reversed
accnt033 Reversing entries: Preparing a reversing entry
accnt034 Creating a balance sheet with asset depreciation
accnt305 Balance sheet subtotals
accnt307 Balance sheet classification

Merchandising Accounting

accnt036 Normal account balances for a retail company
accnt037 Account classification for a retail company
accnt038 Parts of the retail income statement
accnt039 Merchandising: Computing amount due

accnt040 Merchandising: Computing income statement amounts
accnt044 Merchandising: Closing entries
accnt041 Seller's retail entries: Problem type 1
accnt042 Seller's retail entries: Problem type 2
accnt046 Seller's retail entries: Problem type 3
accnt043 Buyer's retail entries: Problem type 1
accnt045 Buyer's retail entries: Problem type 2
accnt047 Buyer's retail entries: Problem type 3
accnt048 Preparing a retail income statement

Advanced Review Topics

accnt054 Cash and cash equivalents
accnt078 Inventory costs
accnt092 Income statement with periodic inventory: Problem type 2
accnt095 Income statement with periodic inventory: Problem type 3
accnt111 Scrapping an asset
accnt112 Selling an asset
accnt141 Revenue recognition: Basic questions

B.84 Business Math

Mathematic Foundations

bmath094 Whole number place value
bmath122 Rounding whole numbers
bmath105 Adding whole numbers
bmath121 Subtracting whole numbers
bmath106 Multiplying whole numbers
bmath002 Dividing whole numbers
bmath003 Types of fractions and conversion procedures
bmath004 Reducing fractions to lowest terms
bmath005 Raising fractions to higher terms
bmath130 Adding and subtracting fractions with the same denominator
bmath006 Adding fractions with different denominators
bmath007 Subtracting fractions with different denominators
bmath008 Multiplying fractions
bmath009 Dividing fractions
bmath131 Adding mixed numbers
bmath132 Subtracting mixed numbers
bmath133 Multiplying mixed numbers
bmath134 Dividing mixed numbers
bmath123 Decimal place value
bmath010 Rounding decimals
bmath012 Adding decimals
bmath124 Subtracting decimals
bmath125 Multiplying decimals
bmath013 Dividing decimals
bmath011 Conversion from fraction to decimal
bmath126 Conversion from decimal to fraction
bmath016 Solving equations, basic
bmath141 Solving equations, advanced
bmath091 Mean and median
bmath092 Frequency and weighted mean
bmath142 Bar graphs

bmath143 Interpreting line graphs
bmath144 Interpreting circle graphs

Percents and Their Applications

bmath018 Converting decimals to percentages
bmath116 Converting percentages to decimals
bmath117 Converting percentages to fractions
bmath113 Converting fractions to percentages
bmath019 Portion formula: Solving for portion
bmath114 Portion formula: Solving for rate
bmath115 Portion formula: Solving for base
bmath020 Calculating percent decreases and increases
bmath021 Single trade discounts and net price
bmath022 Chain discounts: Net price equivalent rate
bmath023 Chain discounts: Single equivalent discount rate
bmath024 Cash discount: Basic calculation
bmath096 Cash discount: Ordinary and receipt of goods dating methods
bmath112 Cash discount: EOM dating method
bmath097 Invoices, trade discounts, and cash discounts
bmath025 Markup based on cost or selling price
bmath001 Markup based on cost: Finding the selling price
bmath027 Markup based on cost: Finding the cost
bmath107 Markup based on selling price: Finding the selling price
bmath108 Markup based on selling price: Finding the cost
bmath029 Markdown
bmath030 Hourly gross pay with overtime
bmath031 Gross pay with straight commission and draw
bmath032 Gross pay with variable commission scale
bmath033 Gross pay with commission and salary
bmath034 FICA with no ceiling
bmath119 FICA with ceiling
bmath035 Calculating federal income tax withholding
bmath036 Employer tax responsibilities
bmath120 FICA, federal tax withholding, and net pay
bmath075 Sales taxes
bmath129 Actual sales before taxes
bmath076 Excise taxes
bmath077 Property tax

Interest

bmath037 Simple interest and maturity value
bmath038 Exact and ordinary methods for simple interest and maturity value
bmath039 Solving for principal, rate, or time in simple interest problems
bmath101 The U. S. Rule: Making partial note payments before due date
bmath040 Structure of promissory notes: Effective interest rate and simple discount note
bmath110 Discounting an interest-bearing note before maturity
bmath109 Computing compound interest with the simple interest formula
bmath042 Compound interest for daily compounding
bmath041 Compound interest for annual, semiannual, and quarterly compounding
bmath102 Nominal interest rate versus annual percentage yield
bmath043 Present value tables
bmath044 Ordinary annuity
bmath045 Annuity due
bmath046 Present value of an ordinary annuity
bmath047 Sinking funds
bmath048 Amount financed, finance charge, and deferred payment

bmath049 Cost of installment buying: Computing the APR
bmath050 Cost of installment buying: Computing the monthly payment
bmath051 Paying off installment loans before due date
bmath052 Revolving charge credit cards

Personal Finance

bmath095 Checking accounts
bmath128 Bank statement and reconciliation process: Basic
bmath015 Bank statement and reconciliation process: Advanced
bmath053 Monthly mortgage payment tables
bmath054 Total cost of interest for a mortgage
bmath055 Amortization schedule: Interest, principal, and new mortgage balance
bmath078 Life insurance premiums
bmath079 Insurance nonforfeiture values
bmath080 Fire insurance premiums
bmath140 Canceling fire insurance
bmath081 Compulsory auto insurance
bmath082 Optional auto insurance
bmath083 Reading stock quotations
bmath085 Calculating return on stock investment
bmath139 Stock yield, earnings per share, and price-earnings ratio
bmath084 Stock dividends
bmath086 Reading bond quotations
bmath087 Calculating bond yields
bmath088 Net asset value of a mutual fund
bmath090 Investment in a mutual fund

Business Finance

bmath056 Balance sheet: Merchandising
bmath135 Balance sheet: Service
bmath057 Vertical analysis of a balance sheet
bmath058 Income statement: Merchandising
bmath136 Income statement: Service
bmath059 Vertical analysis of an income statement
bmath138 Horizontal analysis of financial statements
bmath060 Financial projections
bmath061 Financial ratio analysis
bmath062 Straight-line depreciation: Full year
bmath127 Straight-line depreciation: Partial year
bmath063 Units-of-production depreciation
bmath064 Sum-of-the-years'-digits depreciation
bmath065 Declining-balance depreciation
bmath066 Modified accelerated cost recovery system
bmath067 Inventory: Specific identification
bmath068 Inventory: Weighted-average cost method
bmath069 Inventory: FIFO
bmath070 Inventory: LIFO
bmath071 Retail method of inventory
bmath072 Gross profit method of inventory
bmath073 Inventory turnover
bmath074 Distribution of overhead

B.85 QuickTables

Slice1

arith001 Addition without carry
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith003 Multiplication without carry
arith004 Multiplication with carry

B.86 CC Math 6

Whole Numbers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith633 One-digit addition with carry
arith634 Addition of 3 or 4 one-digit numbers
arith001 Addition without carry
arith635 Adding a 2-digit number and a 1-digit number with carry
arith050 Addition with carry
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith636 Subtracting a 1-digit number from a 2-digit number
arith007 Subtraction without borrowing
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith653 Fact families for addition and subtraction
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith008 One-digit multiplication
arith639 Using multiplication to find the number of squares
arith679 Multiplication by 10, 100, and 1000
arith003 Multiplication without carry
arith004 Multiplication with carry
arith632 Multiplication with trailing zeros: Problem type 1
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith654 Fact families for multiplication and division
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith052 Division without carry
arith005 Division with carry

arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge813 Introduction to solving an equation with multiplication or division
alge008 Multiplicative property of equality with whole numbers
alge016 Translating a sentence into a one-step equation
geom339 Perimeter of a polygon

geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid

Decimals

arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith714 Writing a decimal number less than 1 given its name
arith715 Writing a decimal number greater than 1 given its name
arith716 Writing a decimal number given its name: Advanced
arith829 Reading decimal position on a number line: Tenths
arith830 Reading decimal position on a number line: Hundredths
arith831 Understanding decimal position on a number line using zoom: Hundredths
arith832 Understanding decimal position on a number line using zoom: Thousandths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith221 Rounding decimals
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith668 Addition with money
arith669 Subtraction with money
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith127 Writing a decimal and a fraction for a shaded region
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced

arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith513 Identifying rational decimal numbers
 arith821 Exponents and fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge281 Function tables with one-step rules
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion

unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount

arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 arith918 Comparing discounts
 arith914 Calculations involving paying for college
 arith916 Computing percentages for categories of a budget
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score

Integers and Rational Numbers

alge286 Plotting integers on a number line
 mstat038 Reading the temperature from a thermometer
 arith691 Ordering integers
 arith415 Using a number line to compare integers
 arith699 Writing a signed number for a real-world situation
 arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
 arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
 arith416 Comparing signed numbers relating to a real-world situation
 arith402 Plotting opposite integers on a number line
 arith403 Finding opposites of integers
 arith071 Absolute value of a number
 arith412 Finding all numbers with a given absolute value
 arith605 Plotting rational numbers on a number line
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith431 Identifying a sum as a point located a given distance from another point
 arith430 Identifying relative change when combining two quantities
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith755 Addition and subtraction with 4 or 5 integers
 arith440 Operations with absolute value: Problem type 1
 arith104 Operations with absolute value: Problem type 2
 alge694 Computing the distance between two integers on a number line
 arith433 Computing and understanding distances between integers on a number line
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith952 Word problem with multiplication or division of integers
 arith702 Exponents and integers: Problem type 1
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith750 Signed decimal multiplication

arith751 Signed decimal division
 alge660 Identifying equivalent signed fractions
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 geom525 Computing distances between decimals on the number line
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge001 Identifying numbers as integers or non-integers
 alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge665 Combining like terms: Decimal coefficients
 alge666 Combining like terms: Fractional coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression

Equations and Inequalities

alge800 Additive property of equality with decimals
 alge801 Additive property of equality with fractions and mixed numbers
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge825 Multiplicative property of equality with decimals
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge658 Introduction to solving a rational equation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem

alge672 Choosing stories that can be represented by given two-step equations
 alge014 Solving a word problem with two unknowns using a linear equation
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge636 Solving a two-step linear inequality with whole numbers
 alge846 Translating a sentence into a multi-step inequality
 alge621 Solving a word problem using a one-step linear inequality
 alge623 Solving a word problem using a two-step linear inequality

Graphs and Functions

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 arith454 Making a table and plotting points given a unit rate
 alge283 Graphing whole number functions
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun001 Table for a linear function
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 mstat007 Interpreting a line graph
 geom358 Identifying parallel and perpendicular lines
 geom536 Drawing and identifying a polygon in the coordinate plane
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation

alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge263 Interpreting the graphs of two functions
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom519 Identifying and naming congruent parts of congruent triangles
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals

geom532 Classifying parallelograms
geom818 Finding the coordinates of a point to make a parallelogram
geom870 Sum of the angle measures of a quadrilateral
geom852 The sum of interior angle measures in a convex polygon
arith016 Square root of a perfect square
alge413 Finding all square roots of a number
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge407 Introduction to the Pythagorean Theorem
geom044 Pythagorean Theorem
alge408 Word problem involving the Pythagorean Theorem
geom603 Identifying side lengths that give right triangles

Transformations

geom357 Identifying transformations
geom355 Introduction to translations
geom596 Translating a point and giving its coordinates: One step
geom909 Translating a point and giving its coordinates: Two steps
geom597 Properties of translated figures
geom598 Determining if figures are related by a translation
geom330 Translating a polygon
geom356 Introduction to reflections
arith408 Reflecting a point across an axis
geom533 Reflecting a point across both coordinate axes
geom590 Reflecting a point across an axis and giving its coordinates
arith407 Finding the coordinates of a point reflected across an axis
geom560 Finding the coordinates of a point reflected across both axes
geom534 Reflecting a polygon across the x-axis or y-axis
geom591 Properties of reflected figures
geom592 Determining if figures are related by a reflection
geom332 Reflecting a polygon over a vertical or horizontal line
geom334 Drawing lines of symmetry
geom602 Finding the coordinates of a point reflected across an axis and translated
geom815 Finding an angle of rotation
geom624 Identifying rotational symmetry and angles of rotation
geom593 Rotating a point and giving its coordinates
geom594 Properties of rotated figures
geom595 Determining if figures are related by a rotation
geom335 Rotating a figure about the origin
geom580 Determining if figures are congruent and related by a transformation
geom606 Dilating a segment and giving the coordinates of its endpoints
geom607 The effect of dilation on side length
geom608 Determining if figures are related by a dilation
geom636 The effect of dilation on area

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
geom078 Sides of polygons having the same perimeter
geom221 Finding the missing length in a figure
geom353 Perimeter of a piecewise rectangular figure
alge615 Writing algebraic expressions for the perimeter of a figure
geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom869 Estimates and exact answers

alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom217 Finding the side length of a rectangle given its perimeter or area
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom344 Area involving rectangles and triangles
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom537 Finding the perimeter or area of a rectangle in the coordinate plane
geom832 Area of quadrilaterals in the coordinate plane
geom347 Introduction to a circle: Diameter, radius, and chord
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom311 Volume of a rectangular prism
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom219 Nets of solids
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom555 Distinguishing between surface area and volume
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder

geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations

mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events

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Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith004 Multiplication with carry
 arith615 Introduction to multiplication of large numbers
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith014 Multiplication of large numbers
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith614 Word problem with multiplication or division of whole numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
 arith243 Division of whole numbers given in fractional form
 arith711 Division involving zero
 arith005 Division with carry
 arith901 Whole number division: 2-digit by 2-digit, no remainder
 arith902 Whole number division: 3-digit by 2-digit, no remainder
 arith616 Quotient and remainder: Problem type 1
 arith617 Quotient and remainder: Problem type 2
 arith631 Quotient and remainder: Problem type 3
 arith650 Division involving quotients with intermediate zeros
 arith023 Word problem with division of whole numbers and rounding
 arith651 Introduction to inequalities
 arith652 Comparing a numerical expression with a number
 arith077 Ordering large numbers
 arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith677 Estimating a product

arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith016 Square root of a perfect square
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division

alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom311 Volume of a rectangular prism
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge010 Additive property of equality with integers
alge008 Multiplicative property of equality with whole numbers
alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
alge660 Identifying equivalent signed fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith814 Signed fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
alge432 Introduction to adding fractions with variables and common denominators
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators

arith803 Addition and subtraction of 3 fractions with different denominators
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith605 Plotting rational numbers on a number line
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
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 arith068 Mixed number division
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 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
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 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

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arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
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 arith714 Writing a decimal number less than 1 given its name
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 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
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 arith717 Converting a decimal to a proper fraction without simplifying: Basic
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 arith718 Converting a decimal to a proper fraction in simplest form: Basic
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 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced

arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
geom525 Computing distances between decimals on the number line
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith750 Signed decimal multiplication
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith751 Signed decimal division
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
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arith111 Converting a mixed number to a terminating decimal: Basic
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arith732 Converting a fraction or mixed number to a rounded decimal
arith609 Ordering fractions and decimals
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
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arith748 Addition or subtraction with a decimal and a mixed number
arith749 Multiplication with a decimal and a fraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge800 Additive property of equality with decimals

alge825 Multiplicative property of equality with decimals

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arith823 Writing ratios using different notations
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 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
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 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions
 arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
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 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
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 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
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 time009 Introduction to adding time
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mstat062 Reading a positive temperature from a thermometer
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 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
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arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 arith915 Calculating income tax
 arith918 Comparing discounts
 arith909 Examining a savings plan for college
 arith914 Calculations involving paying for college
 arith920 Comparing total costs for attending different colleges
 arith922 Distinguishing between fixed and variable expenses

arith916 Computing percentages for categories of a budget
 arith919 Computations involving cost of living and hourly wage
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
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 arith917 Computing a person's net worth
 arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
 arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
 arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
 arith910 Calculating and comparing simple interest and compound interest

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 alge700 Combining like terms: Whole number coefficients
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 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
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 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
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 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
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 alge006 Solving a two-step equation with integers
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 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
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alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge658 Introduction to solving a rational equation
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 alge864 Solving an absolute value equation: Problem type 1
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
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 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge016 Translating a sentence into a one-step equation
 alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 alge796 Solving a distance, rate, time problem using a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
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 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
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 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality

alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
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alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
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 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge874 Identifying linear functions given ordered pairs
 geom358 Identifying parallel and perpendicular lines
 mstat007 Interpreting a line graph
 arith454 Making a table and plotting points given a unit rate
 arith501 Identifying proportional relationships in graphs: Basic
 arith502 Identifying proportional relationships in graphs: Advanced
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
 alge699 Comparing proportional relationships given in different forms
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y -intercept
 alge196 Graphing a line through a given point with a given slope
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations

alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 alge625 Identifying linear equations: Basic
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$

alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base

arith024 Ordering numbers with negative exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge687 Introduction to the product rule with negative exponents: Whole number base
alge961 Introduction to the product rule with negative exponents
alge689 Introduction to the quotient rule with negative exponents: Whole number base
alge755 Quotient rule with negative exponents: Problem type 1
alge691 Introduction to the power of a power rule with negative exponents: Whole number base
alge025 Power of a power rule with negative exponents
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot025 Estimating numbers using scientific notation
scinot020 Choosing metric units and converting to the base unit in scientific notation
scinot021 Expressing calculator notation as scientific notation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
scinot017 Estimating the sum or difference of two numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge032 Squaring a binomial: Univariate
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge045 Finding the roots of a quadratic equation with leading coefficient 1
arith601 Square root of a rational perfect square
alge413 Finding all square roots of a number
arith760 Square roots of perfect squares with signs
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge567 Using numerical methods to approximate a square root to the nearest tenth
alge568 Using numerical methods to approximate a square root to the nearest hundredth
arith515 Approximating the location of irrational numbers on a number line
arith712 Ordering real numbers
arith514 Converting a repeating decimal to a fraction
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial

arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1

geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length

geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom832 Area of quadrilaterals in the coordinate plane
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom126 Area of a sector of a circle: Exact answer in terms of pi
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom354 Volume of a rectangular prism made of unit cubes
 geom518 Volume of a solid made of cubes with unit fraction edge lengths

geom535 Volume of a rectangular prism with fractional edge lengths
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom035 Volume of a cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of π
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom133 Ratio of volumes
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of π
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation

mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat090 Comparing sample means
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat084 Assessing the degree of overlap of two distributions
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

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Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property

arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom311 Volume of a rectangular prism
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge010 Additive property of equality with integers
alge008 Multiplicative property of equality with whole numbers
alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
alge660 Identifying equivalent signed fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith814 Signed fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
alge432 Introduction to adding fractions with variables and common denominators
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith605 Plotting rational numbers on a number line
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division

arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 alge790 Evaluating expressions with exponents of zero
 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

Decimals

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 geom525 Computing distances between decimals on the number line
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith750 Signed decimal multiplication
 arith135 Word problem with multiplication of a decimal and a whole number

arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
 arith019 Division of a decimal by a 2-digit decimal
 arith083 Division of a decimal by a power of ten
 arith742 Division of a decimal by a power of 0.1
 arith745 Decimal division with rounding
 arith751 Signed decimal division
 arith136 Word problem with division of a decimal and a whole number
 arith138 Word problem with division of two decimals
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith103 Average of two numbers
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 arith753 Squaring decimal bases: Products greater than 0.1
 arith741 Exponents and decimals: Products less than 0.1
 arith720 Order of operations with decimals: Problem type 1
 arith746 Order of operations with decimals: Problem type 2
 arith747 Order of operations with decimals: Problem type 3
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions
 arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1

arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10

arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 arith915 Calculating income tax
 arith918 Comparing discounts
 arith909 Examining a savings plan for college
 arith914 Calculations involving paying for college
 arith920 Comparing total costs for attending different colleges
 arith922 Distinguishing between fixed and variable expenses
 arith916 Computing percentages for categories of a budget
 arith919 Computations involving cost of living and hourly wage
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score
 arith917 Computing a person's net worth
 arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
 arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
 arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
 arith910 Calculating and comparing simple interest and compound interest

Equations and Inequalities

alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients

alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge658 Introduction to solving a rational equation
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge016 Translating a sentence into a one-step equation
 alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem

alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 alge796 Solving a distance, rate, time problem using a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality

Graphing, Functions, and Sequences

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables

alge066 Finding a solution to a linear equation in two variables
alge280 Graphing a line in quadrant 1
alge877 Graphing a linear equation of the form $y = mx$
alge878 Graphing a line given its equation in slope-intercept form: Integer slope
alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
alge880 Graphing a line given its equation in standard form
alge198 Graphing a vertical or horizontal line
alge884 Finding x- and y-intercepts given the graph of a line on a grid
alge924 Finding x- and y-intercepts of a line given the equation: Basic
alge210 Finding x- and y-intercepts of a line given the equation: Advanced
alge197 Graphing a line given its x- and y-intercepts
alge881 Graphing a line by first finding its x- and y-intercepts
alge874 Identifying linear functions given ordered pairs
geom358 Identifying parallel and perpendicular lines
mstat007 Interpreting a line graph
arith454 Making a table and plotting points given a unit rate
arith501 Identifying proportional relationships in graphs: Basic
arith502 Identifying proportional relationships in graphs: Advanced
arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
alge699 Comparing proportional relationships given in different forms
alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge814 Using right triangles to find the slope of a line
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y-intercept
alge196 Graphing a line through a given point with a given slope
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
alge828 Interpreting direct variation from a graph
alge905 Writing an inverse variation equation
alge903 Identifying direct and inverse variation equations
alge902 Identifying direct and inverse variation from ordered pairs and writing equations
alge176 Word problem on inverse variation
alge220 Word problem on inverse proportions
alge625 Identifying linear equations: Basic
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y-intercept
alge258 Writing an equation of a line given its slope and y-intercept
alge892 Writing an equation and graphing a line given its slope and y-intercept
alge893 Writing an equation in slope-intercept form given the slope and a point
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge070 Writing an equation of a line given the y-intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
alge655 Writing and evaluating a function that models a real-world situation: Basic

alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A|x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions

alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base
 alge961 Introduction to the product rule with negative exponents
 alge689 Introduction to the quotient rule with negative exponents: Whole number base
 alge755 Quotient rule with negative exponents: Problem type 1
 alge691 Introduction to the power of a power rule with negative exponents: Whole number base
 alge025 Power of a power rule with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot025 Estimating numbers using scientific notation
 scinot020 Choosing metric units and converting to the base unit in scientific notation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
 scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
 scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
 scinot016 Adding or subtracting numbers written in scientific notation: Different exponents

scinot017 Estimating the sum or difference of two numbers written in scientific notation
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge032 Squaring a binomial: Univariate
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 arith016 Square root of a perfect square
 arith601 Square root of a rational perfect square
 alge413 Finding all square roots of a number
 arith760 Square roots of perfect squares with signs
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 alge567 Using numerical methods to approximate a square root to the nearest tenth
 alge568 Using numerical methods to approximate a square root to the nearest hundredth
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 alge001 Identifying numbers as integers or non-integers
 arith513 Identifying rational decimal numbers
 arith514 Converting a repeating decimal to a fraction
 arith432 Identifying true statements about rational and irrational numbers
 alge002 Identifying numbers as rational or irrational
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly

alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram

geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers

alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom143 Finding the perimeter or area of a rectangle given one of these values
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom344 Area involving rectangles and triangles
alge724 Finding an area in terms of variables
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom537 Finding the perimeter or area of a rectangle in the coordinate plane
geom832 Area of quadrilaterals in the coordinate plane
geom603 Identifying side lengths that give right triangles
geom589 Demonstrating the converse of the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom347 Introduction to a circle: Diameter, radius, and chord
geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom126 Area of a sector of a circle: Exact answer in terms of π
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of π
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone
geom841 Volume of a sphere
geom574 Word problem involving the volume of a sphere
geom133 Ratio of volumes
geom219 Nets of solids
geom031 Surface area of a cube or a rectangular prism

geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data

mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat090 Comparing sample means
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat084 Assessing the degree of overlap of two distributions
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

B.89 CC Algebra 1

Arithmetic Readiness

arith067 Simplifying a fraction
 arith212 Equivalent fractions
 arith711 Division involving zero
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers
 arith418 Word problem involving the least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
 arith813 Multiplication of 3 fractions

arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith695 Complex fraction without variables: Problem type 1
arith819 Word problem involving fractions and division
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith110 Decimal place value: Tenths and hundredths
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith221 Rounding decimals
arith687 Fractional position on a number line
arith092 Using a common denominator to order fractions
arith829 Reading decimal position on a number line: Tenths
arith830 Reading decimal position on a number line: Hundredths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith733 Using a calculator to convert a fraction to a rounded decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
arith609 Ordering fractions and decimals
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith101 Estimating a sum of whole numbers
arith131 Estimating a decimal sum or difference
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith082 Multiplication of a decimal by a power of ten
arith752 Estimating a product of decimals
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith138 Word problem with division of two decimals
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith823 Writing ratios using different notations
arith663 Writing ratios for real-world situations

arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith834 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith686 Writing a ratio as a percentage
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit012 Time unit conversion with whole number values
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 unit034 Converting between metric and U.S. Customary unit systems

Real Numbers

alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith415 Using a number line to compare integers
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
 arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
 arith416 Comparing signed numbers relating to a real-world situation
 arith402 Plotting opposite integers on a number line
 arith403 Finding opposites of integers
 arith667 Plotting fractions on a number line
 arith605 Plotting rational numbers on a number line
 arith016 Square root of a perfect square
 arith763 Using a calculator to approximate a square root
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 arith071 Absolute value of a number
 arith412 Finding all numbers with a given absolute value
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith430 Identifying relative change when combining two quantities
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith755 Addition and subtraction with 4 or 5 integers
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division

arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
alge660 Identifying equivalent signed fractions
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith821 Exponents and fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
mstat065 Converting between temperatures in Fahrenheit and Celsius
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge700 Combining like terms: Whole number coefficients
alge432 Introduction to adding fractions with variables and common denominators
alge607 Combining like terms: Integer coefficients
alge187 Properties of addition
alge666 Combining like terms: Fractional coefficients
alge665 Combining like terms: Decimal coefficients
arith409 Introduction to the distributive property
arith657 Understanding the distributive property

alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
alge605 Factoring a linear binomial
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge293 Combining like terms in a quadratic expression
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge801 Additive property of equality with fractions and mixed numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers
alge836 Additive property of equality with signed fractions
alge008 Multiplicative property of equality with whole numbers
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions
alge825 Multiplicative property of equality with decimals
alge797 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
geom300 Perimeter of a square or a rectangle
geom221 Finding the missing length in a figure
alge615 Writing algebraic expressions for the perimeter of a figure
geom019 Area of a square or a rectangle
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom142 Word problem involving the area between two rectangles
geom022 Area of a parallelogram
geom801 Area of a triangle
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom477 Circumference and area of a circle: Exact answers in terms of pi
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom311 Volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom090 Volume of a triangular prism
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom033 Volume of a pyramid
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom841 Volume of a sphere

geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere

Linear Equations

alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge815 Introduction to using substitution to solve a linear equation
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 arith504 Writing an equation to represent a proportional relationship
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations

alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
alge014 Solving a word problem with two unknowns using a linear equation
alge673 Writing an equation to represent a real-world problem: Variable on both sides
alge674 Writing and solving a real-world problem given an equation with the variable on both sides
alge730 Writing a multi-step equation for a real-world situation
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
alge218 Solving a word problem involving rates and time conversion
alge823 Solving a one-step word problem using the formula $d = rt$
alge796 Solving a distance, rate, time problem using a linear equation
unit035 Converting between compound units: Basic
unit036 Converting between compound units: Advanced
arith514 Converting a repeating decimal to a fraction
alge819 Solving a proportion of the form $x/a=b/c$: Basic
alge272 Solving a proportion of the form $x/a = b/c$
alge840 Solving a proportion of the form $(x+a)\div b = c\div d$;
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith849 Finding the total amount given the percentage of a partial amount
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith854 Computing a percent mixture
alge795 Solving a percent mixture problem using a linear equation
arith232 Finding simple interest without a calculator
arith853 Introduction to compound interest
geom564 Finding side lengths of squares given an area and a perimeter
geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
geom444 Word problem on optimizing an area or perimeter
geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
geom143 Finding the perimeter or area of a rectangle given one of these values
geom817 Finding a side length given the perimeter and side lengths with variables
geom838 Circumference ratios
geom039 Finding supplementary and complementary angles
geom500 Solving equations involving vertical angles and linear pairs
geom001 Finding an angle measure of a triangle given two angles
geom628 Finding angle measures of a triangle given angles with variables
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
geom538 Finding lengths using scale models
geom539 Finding a scale factor: Same units
geom541 Using a scale drawing to find actual area
geom542 Reproducing a scale drawing at a different scale

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set002 Union and intersection of finite sets
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge621 Solving a word problem using a one-step linear inequality
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules

alge873 Identifying solutions to a linear equation in two variables
alge066 Finding a solution to a linear equation in two variables
alge877 Graphing a linear equation of the form $y = mx$
alge878 Graphing a line given its equation in slope-intercept form: Integer slope
alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
alge880 Graphing a line given its equation in standard form
alge198 Graphing a vertical or horizontal line
alge884 Finding x - and y -intercepts given the graph of a line on a grid
alge924 Finding x - and y -intercepts of a line given the equation: Basic
alge210 Finding x - and y -intercepts of a line given the equation: Advanced
alge197 Graphing a line given its x - and y -intercepts
alge881 Graphing a line by first finding its x - and y -intercepts
mstat007 Interpreting a line graph
alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y -intercept
alge196 Graphing a line through a given point with a given slope
alge625 Identifying linear equations: Basic
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y -intercept
alge258 Writing an equation of a line given its slope and y -intercept
alge892 Writing an equation and graphing a line given its slope and y -intercept
alge314 Finding the slope, y -intercept, and equation for a linear function given a table of values
alge893 Writing an equation in slope-intercept form given the slope and a point
alge318 Finding the slope and a point on a line given its equation in point-slope form
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge313 Writing an equation in standard form given the slope and a point
alge070 Writing an equation of a line given the y -intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge322 Comparing linear functions to the parent function $y=x$
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
geom462 Identifying parallel and perpendicular lines from coordinates
alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
alge655 Writing and evaluating a function that models a real-world situation: Basic
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge670 Identifying independent and dependent quantities from tables and graphs

mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge991 Solving a linear equation by graphing
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat074 Identifying correlation and causation
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun030 Evaluating a piecewise-defined function
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 pcalc750 Finding intercepts of a nonlinear function given its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun031 Graphing a piecewise-defined function: Problem type 1
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph
 alge953 Translating the graph of a parabola: One step
 alge723 How the leading coefficient affects the shape of a parabola
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge185 Writing an equation for a function after a vertical translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps

pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 pcalc773 Transforming the graph of a function using more than one transformation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence

Linear Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
 pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
 alge317 Writing a system of linear equations given its graph
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge988 Identifying the operations used to create equivalent systems of equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
 alge316 Writing an inequality given its graph in the plane: Slanted boundary line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1

Exponents and Exponential Functions

alge821 Understanding the product rule of exponents
alge024 Introduction to the product rule of exponents
alge311 Product rule with positive exponents: Univariate
alge030 Product rule with positive exponents: Multivariate
arith029 Ordering numbers with positive exponents
alge826 Understanding the power rules of exponents
alge306 Introduction to the power of a power rule of exponents
alge305 Introduction to the power of a product rule of exponents
alge307 Power rules with positive exponents: Multivariate products
alge308 Power rules with positive exponents: Multivariate quotients
alge756 Power and product rules with positive exponents
alge451 Simplifying a ratio of multivariate monomials: Basic
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
alge453 Simplifying a ratio of multivariate monomials: Advanced
alge927 Power and quotient rules with positive exponents
alge790 Evaluating expressions with exponents of zero
arith684 Power of 10: Negative exponent
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
arith024 Ordering numbers with negative exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge961 Introduction to the product rule with negative exponents
alge028 Product rule with negative exponents
alge755 Quotient rule with negative exponents: Problem type 1
alge926 Quotient rule with negative exponents: Problem type 2
alge025 Power of a power rule with negative exponents
alge799 Power rules with negative exponents
alge928 Power and quotient rules with negative exponents: Problem type 1
alge929 Power and quotient rules with negative exponents: Problem type 2
alge757 Power, product, and quotient rules with negative exponents
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot021 Expressing calculator notation as scientific notation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
alge971 Table for an exponential function
alge969 Graphing an exponential function: $f(x) = ax$
alge970 Graphing an exponential function: $f(x) = a(b)^x$
alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
alge321 Finding domain and range from the graph of an exponential function
pcalc922 Translating the graph of an exponential function
alge830 Evaluating an exponential function that models a real-world situation
alge301 Solving an exponential equation by finding common bases: Linear exponents
alge177 Finding a final amount in a word problem on exponential growth or decay
alge741 Finding the final amount in a word problem on compound interest
alge966 Finding the initial amount and rate of change given an exponential function
alge968 Writing an equation that models exponential growth or decay
alge967 Writing an exponential function rule given a table of ordered pairs
mstat103 Choosing an exponential model and using it to make a prediction
alge993 Comparing linear, polynomial, and exponential functions
alge645 Finding the first terms of a geometric sequence using an explicit rule
alge933 Finding the next terms of a geometric sequence with whole numbers

alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge930 Greatest common factor of three univariate monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables

alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes

Quadratic Functions and Equations

alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge323 Finding the zeros of a quadratic function given its equation
 alge163 Writing a quadratic equation given the roots and the leading coefficient
 alge703 Solving a word problem using a quadratic equation with rational roots
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge320 Writing a quadratic function given its zeros
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc714 Using a graphing calculator to find the zeros of a quadratic function
 pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 alge319 Rewriting a quadratic function in standard form
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 fun019 Sum, difference, and product of two functions
 alge716 Introduction to the composition of two functions
 fun022 Composition of two functions: Basic
 fun011 Horizontal line test

fun012 Inverse functions: Linear, discrete
pcalc114 Even and odd functions: Problem type 1

Radicals

alge413 Finding all square roots of a number
arith602 Estimating a square root
arith761 Square roots of integers raised to even exponents
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
alge537 Using absolute value to simplify square roots of perfect square monomials
arith094 Cube root of an integer
alge549 Finding n th roots of perfect n th powers with signs
arith768 Finding the n th root of a perfect n th power fraction
alge550 Finding the n th root of a perfect n th power monomial
alge539 Table for a square root function
alge565 Domain of a square root function: Basic
alge566 Domain of a square root function: Advanced
alge543 Graphing a square root function: Problem type 1
alge544 Graphing a square root function: Problem type 2
alge545 Graphing a square root function: Problem type 3
alge812 Converting between radical form and exponent form
alge560 Rational exponents: Unit fraction exponents and whole number bases
alge561 Rational exponents: Unit fraction exponents and bases involving signs
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge251 Rational exponents: Negative exponents and fractional bases
alge558 Rational exponents: Product rule
alge559 Rational exponents: Quotient rule
alge773 Rational exponents: Products and quotients with negative exponents
alge562 Rational exponents: Power of a power rule
alge249 Rational exponents: Powers of powers with negative exponents
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
alge275 Simplifying a radical expression with two variables
alge273 Simplifying a higher root of a whole number
alge551 Introduction to simplifying a higher radical expression
alge552 Simplifying a higher radical expression: Univariate
alge811 Simplifying a higher radical expression: Multivariate
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
alge533 Square root addition or subtraction with three terms
alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
alge532 Simplifying a sum or difference of radical expressions: Univariate
alge084 Simplifying a sum or difference of radical expressions: Multivariate
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
arith039 Square root multiplication: Advanced
alge522 Introduction to simplifying a product of radical expressions: Univariate
alge523 Simplifying a product of radical expressions: Univariate
alge640 Simplifying a product of radical expressions: Multivariate
alge556 Introduction to simplifying a product of higher roots
alge557 Simplifying a product of higher radical expressions
alge525 Introduction to simplifying a product involving square roots using the distributive property
alge526 Simplifying a product involving square roots using the distributive property: Basic
alge276 Simplifying a product involving square roots using the distributive property: Advanced
alge774 Special products of radical expressions: Conjugates and squaring
alge984 Classifying sums and products as rational or irrational
arith766 Simplifying a quotient of square roots
alge530 Simplifying a quotient involving a sum or difference with a square root

alge527 Rationalizing a denominator: Quotient involving square roots
 alge528 Rationalizing a denominator: Square root of a fraction
 alge529 Rationalizing a denominator: Quotient involving a monomial
 alge534 Rationalizing a denominator using conjugates: Integer numerator
 alge535 Rationalizing a denominator using conjugates: Square root in numerator
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
 alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
 alge411 Solving a radical equation with a quadratic expression under the radical
 alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced
 alge698 Solving an equation of the form $x^3 = a$ using integers
 geom565 Finding the side length of a cube given its volume
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom603 Identifying side lengths that give right triangles
 geom588 Informal proof of the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat047 Introduction to expectation
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 stat805 Making a reasonable inference based on proportion statistics
 mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph

mstat031 Interpreting a stem-and-leaf plot
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
geom814 Angle measure in a circle graph
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
stat009 Percentiles
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat082 Computing mean absolute deviation from a list of numerical values
mstat042 Interpreting a Venn diagram of 2 sets
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
stat790 Permutations, combinations, and the multiplication principle for counting
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
mstat046 Experimental and theoretical probability
stat106 Outcomes and event probability
stat112 Probabilities involving two dice
mstat116 Probabilities of a permutation and a combination
mstat048 Odds of an event
mstat011 Area as probability
mstat019 Identifying independent events given descriptions of experiments
mstat012 Probability of independent events
mstat013 Probability of dependent events
stat117 Probabilities of draws with replacement
stat118 Probabilities of draws without replacement
mstat115 Determining outcomes for compound events and complements of events
mstat110 Using a Venn diagram to understand the multiplication rule for probability
mstat107 Outcomes and event probability: Conditional probability
mstat104 Identifying independent events given values of probabilities
mstat105 Computing conditional probability using a two-way frequency table
mstat106 Computing conditional probability to make an inference using a two-way frequency table
mstat118 Conditional probability: Basic
mstat109 Using a Venn diagram to understand the addition rule for probability
mstat108 Outcomes and event probability: Addition rule
mstat032 Probability of the union of two events
mstat117 Probability of intersection or union: Word problems

mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat114 Using a random number table to make a fair decision
 stat021 Population standard deviation
 stat852 Word problem involving calculations from a normal distribution

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 pcalc682 Evaluating functions: Absolute value, rational, radical
 alge715 Domain of a rational function: Excluded values
 alge454 Simplifying a ratio of factored polynomials: Linear factors
 alge455 Simplifying a ratio of factored polynomials: Factors with exponents
 alge456 Simplifying a ratio of polynomials using GCF factoring
 alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
 alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge459 Simplifying a ratio of polynomials: Problem type 3
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge460 Multiplying rational expressions made up of linear expressions
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
 alge462 Multiplying rational expressions involving multivariate quadratics
 alge054 Dividing rational expressions involving multivariate monomials
 alge463 Dividing rational expressions involving linear expressions
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
 alge465 Dividing rational expressions involving multivariate quadratics
 alge466 Multiplication and division of 3 rational expressions
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
 alge428 Finding the LCD of rational expressions with linear denominators: Common factors
 alge429 Finding the LCD of rational expressions with quadratic denominators
 alge430 Writing equivalent rational expressions with monomial denominators
 alge431 Writing equivalent rational expressions with polynomial denominators
 alge304 Writing equivalent rational expressions involving opposite factors
 alge433 Adding rational expressions with common denominators and monomial numerators
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge434 Adding rational expressions with common denominators and GCF factoring
 alge435 Adding rational expressions with common denominators and quadratic factoring
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge437 Adding rational expressions with denominators ax and bx : Basic
 alge438 Adding rational expressions with denominators ax and bx : Advanced
 alge439 Adding rational expressions with denominators axn and bxm
 alge440 Adding rational expressions with multivariate monomial denominators: Basic
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge441 Adding rational expressions with linear denominators without common factors: Basic
 alge442 Adding rational expressions with linear denominators without common factors: Advanced
 alge443 Adding rational expressions with linear denominators with common factors: Basic
 alge444 Adding rational expressions with linear denominators with common factors: Advanced
 alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
 alge661 Adding rational expressions involving different quadratic denominators
 alge446 Adding 3 rational expressions with different quadratic denominators
 arith696 Complex fraction without variables: Problem type 2

alge470 Complex fraction involving univariate monomials
 alge058 Complex fraction involving multivariate monomials
 alge471 Complex fraction: GCF factoring
 alge472 Complex fraction: Quadratic factoring
 alge473 Complex fraction made of sums involving rational expressions: Problem type 1
 alge474 Complex fraction made of sums involving rational expressions: Problem type 2
 alge475 Complex fraction made of sums involving rational expressions: Problem type 3
 alge476 Complex fraction made of sums involving rational expressions: Problem type 4
 alge477 Complex fraction made of sums involving rational expressions: Problem type 5
 alge478 Complex fraction made of sums involving rational expressions: Problem type 6
 alge479 Complex fraction made of sums involving rational expressions: Multivariate
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
 alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
 alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
 alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
 alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge450 Solving a distance, rate, time problem using a rational equation
 alge059 Ordering fractions with variables
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation
 pcalc917 Finding the asymptotes of a rational function: Constant over linear
 pcalc918 Finding the asymptotes of a rational function: Linear over linear
 alge515 Graphing a rational function: Constant over linear
 alge516 Graphing a rational function: Linear over linear

B.90 CC Geometry

Algebra Review

arith233 Introduction to exponents
 arith048 Order of operations with whole numbers
 arith051 Order of operations with whole numbers and grouping symbols
 arith693 Order of operations with whole numbers and exponents: Basic
 arith067 Simplifying a fraction
 arith212 Equivalent fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith711 Division involving zero
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers
 arith801 Finding the LCD of two fractions

arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith813 Multiplication of 3 fractions
arith821 Exponents and fractions
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith695 Complex fraction without variables: Problem type 1
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith733 Using a calculator to convert a fraction to a rounded decimal
arith624 Addition of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
alge286 Plotting integers on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith118 Order of operations with integers
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith822 Signed fraction multiplication: Basic
arith117 Signed decimal addition and subtraction
arith702 Exponents and integers: Problem type 1
arith704 Exponents and signed fractions
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith440 Operations with absolute value: Problem type 1
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge700 Combining like terms: Whole number coefficients

alge607 Combining like terms: Integer coefficients
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
alge608 Using distribution and combining like terms to simplify: Univariate
alge293 Combining like terms in a quadratic expression
alge432 Introduction to adding fractions with variables and common denominators
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers
alge836 Additive property of equality with signed fractions
alge008 Multiplicative property of equality with whole numbers
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions
alge825 Multiplicative property of equality with decimals
alge797 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge803 Using two steps to solve an equation with whole numbers
alge266 Additive property of equality with a negative coefficient
alge006 Solving a two-step equation with integers
alge815 Introduction to using substitution to solve a linear equation
alge200 Solving an equation to find the value of an expression
alge920 Introduction to solving an equation with parentheses
alge837 Solving a multi-step equation given in fractional form
alge986 Identifying properties used to solve a linear equation
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge208 Solving a two-step equation with signed fractions
alge603 Introduction to solving an absolute value equation
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge831 Translating a phrase into a one-step expression
alge016 Translating a sentence into a one-step equation
arith504 Writing an equation to represent a proportional relationship
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
arith834 Converting between percentages and decimals
arith843 Using a calculator to convert a fraction to a rounded percentage
arith030 Finding a percentage of a whole number without a calculator: Basic
arith840 Finding a percentage of a whole number
arith862 Applying the percent equation: Problem type 1
arith686 Writing a ratio as a percentage
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease

arith858 Finding the percentage increase or decrease: Basic
alge015 Translating a sentence by using an inequality symbol
alge653 Introduction to identifying solutions to an inequality
alge017 Graphing a linear inequality on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge652 Identifying solutions to a one-step linear inequality
alge848 Additive property of inequality with whole numbers
alge849 Additive property of inequality with integers
alge809 Multiplicative property of inequality with whole numbers
alge854 Multiplicative property of inequality with integers
alge964 Multiplicative property of inequality with signed fractions
alge844 Identifying solutions to a two-step linear inequality in one variable
alge636 Solving a two-step linear inequality with whole numbers
alge855 Solving a two-step linear inequality: Problem type 1
alge856 Solving a two-step linear inequality: Problem type 2
alge857 Solving a two-step linear inequality with a fractional coefficient
alge024 Introduction to the product rule of exponents
alge311 Product rule with positive exponents: Univariate
alge306 Introduction to the power of a power rule of exponents
alge305 Introduction to the power of a product rule of exponents
alge451 Simplifying a ratio of multivariate monomials: Basic
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
alge798 Simplifying a sum or difference of two univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge764 Multiplying conjugate binomials: Univariate
alge765 Multiplying binomials in two variables
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
arith056 Factors
arith033 Greatest common factor of 2 numbers
alge605 Factoring a linear binomial
alge736 Introduction to the GCF of two monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge936 Factoring out a constant before factoring a quadratic
alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
alge944 Factoring a perfect square trinomial with leading coefficient 1
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root
arith601 Square root of a rational perfect square
arith760 Square roots of perfect squares with signs
arith761 Square roots of integers raised to even exponents
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
alge537 Using absolute value to simplify square roots of perfect square monomials
arith094 Cube root of an integer
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
arith767 Introduction to square root addition or subtraction
arith766 Simplifying a quotient of square roots
alge527 Rationalizing a denominator: Quotient involving square roots

alge528 Rationalizing a denominator: Square root of a fraction
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom564 Finding side lengths of squares given an area and a perimeter
 geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom410 Word problem involving the area of a square or a rectangle
 geom142 Word problem involving the area between two rectangles
 geom444 Word problem on optimizing an area or perimeter
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit034 Converting between metric and U.S. Customary unit systems
 unit009 U.S. Customary area unit conversion with whole number values
 unit010 Metric area unit conversion with decimal values

Segments and Angles

geom349 Naming segments, rays, and lines
 geom459 Analyzing relationships between points, lines, and planes given a figure
 geom359 Identifying congruent shapes on a grid

geom358 Identifying parallel and perpendicular lines
 geom407 Matching basic geometric terms with their definitions
 geom392 Introduction to segment addition
 alge694 Computing the distance between two integers on a number line
 geom394 Computing distances between decimals on a number line
 geom393 Finding a point on a number line given the length of a segment and another point
 geom395 Midpoint of a number line segment: Integers
 geom396 Midpoint of a number line segment: Decimals
 geom397 Using a segment's midpoint and endpoint to locate the other endpoint
 geom521 Segment addition and midpoints
 geom399 Finding a point that partitions a number line segment in a given fractional relationship
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge850 Table for a linear equation
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom458 Identifying congruent segments in the plane
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 geom406 Finding a point that partitions a segment in the plane in a given fractional relationship
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom460 Naming angles, sides of angles, and vertices
 geom039 Finding supplementary and complementary angles
 geom454 Introduction to angle addition
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom800 Identifying linear pairs and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom500 Solving equations involving vertical angles and linear pairs
 geom389 Constructing congruent line segments
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom154 Constructing the perpendicular bisector of a line segment
 geom457 Making conjectures given a geometric construction

Reasoning

alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge732 Finding patterns in shapes
 mstat042 Interpreting a Venn diagram of 2 sets
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic011 Writing the converse, inverse, and contrapositive of a conditional statement and determining their truth values

glogic012 Writing a biconditional statement as a conditional statement and its converse and determining truth values
 glogic013 Finding counterexamples to conjectures
 glogic008 Conditional statements and deductive reasoning
 geom665 Distinguishing between undefined terms, definitions, postulates, conjectures, and theorems
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom611 Proofs involving angle congruence

Lines

geom304 Identifying corresponding and alternate angles
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom503 Solving equations involving angles and two pairs of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 fun001 Table for a linear function
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge259 Graphing a line given its slope and y -intercept
 alge196 Graphing a line through a given point with a given slope
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y -intercept
 alge258 Writing an equation of a line given its slope and y -intercept
 alge892 Writing an equation and graphing a line given its slope and y -intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge318 Finding the slope and a point on a line given its equation in point-slope form
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge313 Writing an equation in standard form given the slope and a point
 alge070 Writing an equation of a line given the y -intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 geom462 Identifying parallel and perpendicular lines from coordinates
 alge914 Identifying solutions to a system of linear equations

alge725 Graphically solving a system of linear equations
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition

Triangles

geom306 Acute, obtuse, and right triangles
 geom626 Classifying scalene, isosceles, and equilateral triangles by side lengths
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom322 Identifying coordinates that give right triangles
 geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom628 Finding angle measures of a triangle given angles with variables
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom357 Identifying transformations
 geom519 Identifying and naming congruent parts of congruent triangles
 geom325 Determining if figures are related by rigid motions
 geom327 Examining triangle congruence in terms of rigid motion
 geom329 Exploring the triangle congruence theorems
 geom418 Completing proofs involving congruent triangles using SSS or SAS
 geom420 Introduction to proving triangles congruent using SSS or SAS
 geom520 Identifying and naming congruent triangles
 geom419 Completing proofs involving congruent triangles using ASA or AAS
 geom421 Introduction to proving triangles congruent using ASA or AAS
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom647 Separating overlapping triangles and identifying common features
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom423 Proofs involving congruent triangles with parallel or perpendicular segments
 geom424 Determining when to apply the HL congruence property
 geom425 Introduction to proving triangles congruent using the HL property
 geom422 Introduction to proofs involving congruent triangles and CPCTC
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom645 Finding side lengths and angle measures of isosceles and equilateral triangles
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom629 Finding angle measures of an isosceles triangle given angles with variables
 geom363 Proofs of theorems involving isosceles triangles
 geom449 Classifying segments inside triangles
 geom446 Using the circumcenter of a triangle to find segment lengths
 geom447 Using the incenter of a triangle to find segment lengths and angle measures
 geom448 Using the centroid of a triangle to find segment lengths
 geom413 Introduction to the triangle midsegment theorem
 geom324 Proving the triangle midsegment theorem in the coordinate plane
 geom441 Proof involving points on the perpendicular bisector of a line segment
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom664 Using triangle inequality to determine possible lengths of a third side
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom543 Drawing a circle with a given radius or diameter
 geom545 Drawing triangles with given side lengths using a compass

geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom451 Using the hinge theorem
 geom650 Indirect proof (proof by contradiction)

Polygons and Quadrilaterals

geom361 Naming polygons
 geom870 Sum of the angle measures of a quadrilateral
 geom656 Finding the sum of the interior angle measures of a convex polygon given the number of sides
 geom655 Finding the number of sides of a convex polygon given the sum of the measures of the interior angles
 geom657 Finding a missing interior angle measure in a convex polygon
 geom658 Finding the measures of an interior angle and an exterior angle of a regular polygon
 geom659 Finding the number of sides of a regular polygon given the measure of an interior angle
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom436 Finding angle measures involving diagonals of a rhombus
 geom523 Conditions for quadrilaterals
 geom661 Completing proofs of theorems involving sides of a parallelogram
 geom662 Completing proofs of theorems involving angles of a parallelogram
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom818 Finding the coordinates of a point to make a parallelogram
 geom819 Finding coordinates of vertices of polygons
 geom321 Proving that a quadrilateral with given vertices is a parallelogram
 geom408 Classifying parallelograms in the coordinate plane
 geom863 Congruence in the coordinate plane

Similarity

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 alge888 Finding the coordinate that yields a given slope
 geom390 Finding a point that partitions a number line segment in a given ratio
 geom391 Finding a point that partitions a segment in the plane in a given ratio
 geom360 Identifying similar or congruent shapes on a grid
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom475 Triangles and angle bisectors
 geom326 Determining if figures are related by similarity transformations
 geom328 Examining triangle similarity in terms of similarity transformations
 geom364 Identifying and naming similar triangles

geom365 Proofs involving similar triangles
 geom472 Completing proofs involving the triangle proportionality theorem
 geom461 Proving the slope criterion for parallel or perpendicular lines
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale

Right Triangles and Trigonometry

alge408 Word problem involving the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
 geom862 Using the Pythagorean Theorem repeatedly
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom452 Identifying similar right triangles that overlap
 geom507 Right triangles and geometric mean
 geom473 Proving the Pythagorean Theorem using similar triangles
 geom860 Special right triangles: Decimal answers
 geom506 Special right triangles: Exact answers
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc642 Solving a right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom409 Proving the law of cosines
 pcalc063 Translation of a vector
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 pcalc060 Magnitude of a vector given in component form
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph

Transformations

geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points

geom375 Understanding the definition of a translation
 pcalc038 Addition or subtraction of matrices
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom376 Understanding the definition of a reflection
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom377 Understanding the definition of a rotation
 geom334 Drawing lines of symmetry
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom831 Rotational and point symmetries
 geom369 Writing a rule to describe a translation
 geom370 Writing a rule to describe a reflection
 geom371 Writing a rule to describe a rotation
 geom373 Identifying transformations that map a quadrilateral onto itself
 geom374 Identifying transformations that map a regular polygon onto itself
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom372 Writing a rule to describe a dilation
 geom582 Determining if figures are similar and related by a sequence of transformations
 geom463 Exploring similarity of circles
 geom379 Exploring the effect of dilation on lines
 pcalc037 Scalar multiplication of a matrix

Area and Volume

geom022 Area of a parallelogram
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom430 Word problem on population density
 geom426 Finding the perimeter of a triangle, trapezoid, or parallelogram in the coordinate plane
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane
 geom440 Finding the area of a right triangle using the Pythagorean Theorem
 geom068 Computing an area using the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom439 Using trigonometry to find the area of a right triangle
 pcalc646 Finding the area of a triangle using trigonometry
 geom319 Expressing the area of a triangle in terms of the sine of one of its angles
 pcalc647 Heron's formula

geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom023 Area of a trapezoid
geom434 Area of a rhombus
geom435 Finding the area of a rhombus using the Pythagorean Theorem
geom438 Finding the area of a trapezoid, rhombus, or kite in the coordinate plane
geom213 Area of a regular polygon
geom479 Finding the area of a regular polygon using special right triangles
geom481 Side lengths, perimeters, and areas of similar polygons
geom347 Introduction to a circle: Diameter, radius, and chord
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom427 Informal argument for the formula of the circumference of a circle
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom477 Circumference and area of a circle: Exact answers in terms of pi
geom570 Distinguishing between the area and circumference of a circle
geom428 Informal argument for the formula of the area of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom649 Area involving multiple inscribed figures
geom212 Circles inscribed in and circumscribed about regular polygons
geom126 Area of a sector of a circle: Exact answer in terms of pi
geom429 Informal argument for the formula of the area of a sector
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom219 Nets of solids
geom861 Nets of solids: Advanced
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom381 Identifying solids generated by rotations of two-dimensional regions
geom443 Identifying geometric shapes that model real-world objects
geom491 Identifying properties of Euclidean and spherical geometries
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom578 Word problem involving the surface area of a cylinder
geom484 Word problem involving the surface area of rectangular prisms and cylinders
geom483 Word problem involving the surface area of rectangular prisms and pyramids
geom354 Volume of a rectangular prism made of unit cubes
geom311 Volume of a rectangular prism
geom555 Distinguishing between surface area and volume
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
geom865 Measuring the net of a solid to find surface area or volume
geom382 Volume of an oblique rectangular prism
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom565 Finding the side length of a cube given its volume
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom386 Computations involving density, mass, and volume
geom387 Word problem on density involving the volume of a rectangular solid

geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom035 Volume of a cylinder
 geom385 Informal argument for the formula of the volume of a cylinder
 geom383 Volume of an oblique cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom388 Word problem on density involving the volume of a cylindrical solid
 geom384 Using cross sections to identify solids with the same volume
 geom133 Ratio of volumes
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom654 Informal argument for the formula of the volume of a cone
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom842 Surface area of a sphere
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom488 Identifying similar solids
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom489 Computing side length, surface area, and volume for similar solids
 geom490 Word problem involving volumes of similar solids

Circles

geom464 Identifying chords, secants, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom470 Constructing a tangent of a circle
 geom465 Naming and finding measures of central angles, inscribed angles, and arcs of a circle
 geom467 Applying properties of radii, diameters, and chords
 geom814 Angle measure in a circle graph
 geom466 Arc length
 geom805 Arc length and area of a sector of a circle
 geom653 Computing ratios of arc lengths to radii and describing the result
 pcalc002 Converting between degree and radian measure: Problem type 1
 geom468 Central angles and inscribed angles of a circle
 geom469 Central angles and angles involving chords and tangents of a circle
 geom666 Inscribed angles in relation to a diameter or a polygon inscribed in a circle
 geom667 Inscribed angles and angles involving chords and tangents of a circle
 geom492 Establishing facts about a quadrilateral inscribed in a circle
 geom312 Inscribing an equilateral triangle or a regular hexagon in a circle
 geom313 Inscribing a square in a circle
 geom314 Inscribing a circle in a triangle
 geom315 Circumscribing a circle about a triangle
 geom567 Angles of intersecting secants and tangents
 geom568 Lengths of chords, secants, and tangents
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 alge094 Completing the square
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle

pcalc066 Writing an equation of a circle given the endpoints of a diameter
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 geom494 Deriving the equation of a parabola given its focus and directrix

Probability

mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 pcalc809 Introduction to permutations and combinations
 pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat046 Experimental and theoretical probability
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat116 Probabilities of a permutation and a combination
 mstat048 Odds of an event
 mstat011 Area as probability
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat047 Introduction to expectation
 mstat114 Using a random number table to make a fair decision
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 mstat019 Identifying independent events given descriptions of experiments
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 mstat115 Determining outcomes for compound events and complements of events
 mstat110 Using a Venn diagram to understand the multiplication rule for probability
 mstat107 Outcomes and event probability: Conditional probability
 mstat104 Identifying independent events given values of probabilities
 mstat105 Computing conditional probability using a two-way frequency table
 mstat106 Computing conditional probability to make an inference using a two-way frequency table
 mstat118 Conditional probability: Basic
 mstat109 Using a Venn diagram to understand the addition rule for probability
 mstat108 Outcomes and event probability: Addition rule
 mstat032 Probability of the union of two events
 mstat117 Probability of intersection or union: Word problems

B.91 CC Algebra 2

Real Numbers

arith687 Fractional position on a number line
alge286 Plotting integers on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root
arith712 Ordering real numbers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith695 Complex fraction without variables: Problem type 1
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
mstat065 Converting between temperatures in Fahrenheit and Celsius
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge001 Identifying numbers as integers or non-integers
alge002 Identifying numbers as rational or irrational
alge432 Introduction to adding fractions with variables and common denominators
alge607 Combining like terms: Integer coefficients
alge187 Properties of addition
alge666 Combining like terms: Fractional coefficients
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
alge188 Properties of real numbers

alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 geom300 Perimeter of a square or a rectangle
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom340 Area of a piecewise rectangular figure
 geom142 Word problem involving the area between two rectangles
 geom022 Area of a parallelogram
 geom801 Area of a triangle
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom802 Circumference and area of a circle
 geom477 Circumference and area of a circle: Exact answers in terms of pi
 geom302 Area involving rectangles and circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom311 Volume of a rectangular prism
 geom090 Volume of a triangular prism
 geom035 Volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom033 Volume of a pyramid
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere

Linear Equations and Inequalities

alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients

alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4
 alge167 Solving an absolute value equation of the form $-ax+b = -cx+d$
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 arith504 Writing an equation to represent a proportional relationship
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge730 Writing a multi-step equation for a real-world situation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 alge218 Solving a word problem involving rates and time conversion
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge796 Solving a distance, rate, time problem using a linear equation
 geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom500 Solving equations involving vertical angles and linear pairs
 geom628 Finding angle measures of a triangle given angles with variables
 geom838 Circumference ratios
 arith514 Converting a repeating decimal to a fraction
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 arith849 Finding the total amount given the percentage of a partial amount
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic

arith225 Finding the percentage increase or decrease: Advanced
 arith854 Computing a percent mixture
 alge795 Solving a percent mixture problem using a linear equation
 arith232 Finding simple interest without a calculator
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set004 Set builder and interval notation
 set002 Union and intersection of finite sets
 set005 Union and intersection of intervals
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge747 Solving a compound linear inequality: Interval notation
 alge846 Translating a sentence into a multi-step inequality
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Graphing and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge850 Table for a linear equation
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid

alge924 Finding x- and y-intercepts of a line given the equation: Basic
alge210 Finding x- and y-intercepts of a line given the equation: Advanced
alge197 Graphing a line given its x- and y-intercepts
alge881 Graphing a line by first finding its x- and y-intercepts
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y-intercept
alge196 Graphing a line through a given point with a given slope
alge625 Identifying linear equations: Basic
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y-intercept
alge258 Writing an equation of a line given its slope and y-intercept
alge892 Writing an equation and graphing a line given its slope and y-intercept
alge314 Finding the slope, y-intercept, and equation for a linear function given a table of values
alge893 Writing an equation in slope-intercept form given the slope and a point
alge318 Finding the slope and a point on a line given its equation in point-slope form
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge313 Writing an equation in standard form given the slope and a point
alge070 Writing an equation of a line given the y-intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge322 Comparing linear functions to the parent function $y=x$
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
geom462 Identifying parallel and perpendicular lines from coordinates
geom322 Identifying coordinates that give right triangles
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge991 Solving a linear equation by graphing
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat069 Computing residuals
mstat070 Interpreting residual plots
mstat093 Classifying linear and nonlinear relationships from scatter plots
mstat071 Linear relationship and the correlation coefficient
mstat096 Identifying outliers and clustering in scatter plots
fun032 Identifying functions from relations
fun010 Vertical line test
fun016 Domain and range from ordered pairs
fun001 Table for a linear function
pcalc760 Evaluating functions: Linear and quadratic or cubic
fun033 Variable expressions as inputs of functions: Problem type 1

fun030 Evaluating a piecewise-defined function
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 fun024 Domain and range from the graph of a continuous function
 fun025 Domain and range from the graph of a piecewise function
 pcalc750 Finding intercepts of a nonlinear function given its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc751 Finding where a function is increasing, decreasing, or constant given the graph: Interval notation
 pcalc752 Finding local maxima and minima of a function given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$: Basic
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun031 Graphing a piecewise-defined function: Problem type 1
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph
 alge953 Translating the graph of a parabola: One step
 alge723 How the leading coefficient affects the shape of a parabola
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge185 Writing an equation for a function after a vertical translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 pcalc773 Transforming the graph of a function using more than one transformation
 fun020 Writing an equation for a function after a vertical and horizontal translation

Systems of Linear Equations and Inequalities

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
 pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
 alge317 Writing a system of linear equations given its graph
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions

alge077 Creating an inconsistent system of linear equations
 alge988 Identifying the operations used to create equivalent systems of equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
 alge316 Writing an inequality given its graph in the plane: Slanted boundary line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc095 Linear programming
 pcalc094 Solving a word problem using linear programming
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc039 Multiplication of matrices: Basic
 pcalc710 Multiplication of matrices: Advanced
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 pcalc046 Solving a system of linear equations given its augmented matrix
 pcalc040 Finding the inverse of a 2x2 matrix
 pcalc041 Finding the inverse of a 3x3 matrix
 pcalc042 Finding the determinant of a 2x2 matrix
 pcalc711 Using the inverse of a matrix to solve a 3x3 system of linear equations
 pcalc043 Finding the determinant of a 3x3 matrix
 pcalc045 Using Cramer's rule to solve a 2x2 system of linear equations
 pcalc047 Using Cramer's rule to solve a 3x3 system of linear equations

Exponents and Polynomials

alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero

arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
arith024 Ordering numbers with negative exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge961 Introduction to the product rule with negative exponents
alge028 Product rule with negative exponents
alge755 Quotient rule with negative exponents: Problem type 1
alge926 Quotient rule with negative exponents: Problem type 2
alge025 Power of a power rule with negative exponents
alge799 Power rules with negative exponents
alge928 Power and quotient rules with negative exponents: Problem type 1
alge929 Power and quotient rules with negative exponents: Problem type 2
alge757 Power, product, and quotient rules with negative exponents
arith036 Scientific notation with positive exponent
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge932 Simplifying a sum or difference of multivariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
alge835 Multiplying a multivariate polynomial by a monomial
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge081 Multiplying conjugate binomials: Multivariate
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
alge973 Multiplying binomials with negative coefficients
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge759 Dividing a polynomial by a monomial: Univariate
alge760 Dividing a polynomial by a monomial: Multivariate
alge761 Polynomial long division: Problem type 1
alge762 Polynomial long division: Problem type 2
alge763 Polynomial long division: Problem type 3
pcalc117 Synthetic division
alge985 Closure properties of integers and polynomials
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
alge605 Factoring a linear binomial
alge736 Introduction to the GCF of two monomials
alge930 Greatest common factor of three univariate monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge739 Factoring out a monomial from a polynomial: Multivariate
alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
alge923 Factoring a univariate polynomial by grouping: Problem type 1
alge950 Factoring a univariate polynomial by grouping: Problem type 2
alge951 Factoring a multivariate polynomial by grouping: Problem type 1
alge952 Factoring a multivariate polynomial by grouping: Problem type 2

alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes

Quadratic and Polynomial Functions

alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge046 Roots of a product of polynomials
 alge323 Finding the zeros of a quadratic function given its equation
 alge163 Writing a quadratic equation given the roots and the leading coefficient
 alge703 Solving a word problem using a quadratic equation with rational roots
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith094 Cube root of an integer
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 arith767 Introduction to square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith039 Square root multiplication: Advanced
 alge525 Introduction to simplifying a product involving square roots using the distributive property
 arith766 Simplifying a quotient of square roots
 alge530 Simplifying a quotient involving a sum or difference with a square root
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge778 Using i to rewrite square roots of negative numbers
 alge779 Simplifying a product and quotient involving square roots of negative numbers
 pcalc048 Adding or subtracting complex numbers
 pcalc049 Multiplying complex numbers
 pcalc050 Dividing complex numbers
 pcalc053 Simplifying a power of i
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers

alge963 Applying the quadratic formula: Decimal answers
 pcalc051 Solving a quadratic equation with complex roots
 alge214 Discriminant of a quadratic equation
 alge193 Discriminant of a quadratic equation with parameter
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge320 Writing a quadratic function given its zeros
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc714 Using a graphing calculator to find the zeros of a quadratic function
 pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 alge319 Rewriting a quadratic function in standard form
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 alge784 Solving a quadratic inequality written in factored form
 alge771 Solving a quadratic inequality
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 pcalc114 Even and odd functions: Problem type 1
 pcalc764 Finding zeros of a polynomial function written in factored form
 pcalc766 Finding a polynomial of a given degree with given zeros: Real zeros
 pcalc765 Finding x- and y-intercepts given a polynomial function
 pcalc782 Determining the end behavior of the graph of a polynomial function
 pcalc783 Matching graphs with polynomial functions
 pcalc738 Inferring properties of a polynomial function from its graph
 pcalc794 Using a graphing calculator to find local extrema of a polynomial function
 pcalc115 Using a graphing calculator to solve a word problem involving a local extremum of a polynomial function
 pcalc786 Using the remainder theorem to evaluate a polynomial
 pcalc787 The Factor Theorem
 pcalc758 Finding all possible rational zeros using the rational zeros theorem: Problem type 1
 pcalc759 Finding all possible rational zeros using the rational zeros theorem: Problem type 2
 pcalc788 Descartes' Rule of Signs
 pcalc743 Using the rational zeros theorem to find all zeros of a polynomial: Rational zeros
 pcalc744 Using the rational zeros theorem to find all zeros of a polynomial: Irrational zeros
 pcalc795 Using a graphing calculator to find zeros of a polynomial function
 pcalc704 Using a graphing calculator to solve a word problem involving a polynomial of degree 3
 pcalc785 Multiplying expressions involving complex conjugates
 pcalc767 Finding a polynomial of a given degree with given zeros: Complex zeros
 pcalc745 Using the rational zeros theorem to find all zeros of a polynomial: Complex zeros
 pcalc703 Using the conjugate zeros theorem to find all zeros of a polynomial
 pcalc705 Linear factors theorem and conjugate zeros theorem

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 alge715 Domain of a rational function: Excluded values

alge454 Simplifying a ratio of factored polynomials: Linear factors
alge455 Simplifying a ratio of factored polynomials: Factors with exponents
alge456 Simplifying a ratio of polynomials using GCF factoring
alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
alge710 Simplifying a ratio of polynomials: Problem type 1
alge682 Simplifying a ratio of polynomials: Problem type 2
alge459 Simplifying a ratio of polynomials: Problem type 3
alge034 Simplifying a ratio of multivariate polynomials
alge053 Multiplying rational expressions involving multivariate monomials
alge460 Multiplying rational expressions made up of linear expressions
alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
alge462 Multiplying rational expressions involving multivariate quadratics
alge054 Dividing rational expressions involving multivariate monomials
alge463 Dividing rational expressions involving linear expressions
alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
alge465 Dividing rational expressions involving multivariate quadratics
alge466 Multiplication and division of 3 rational expressions
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
alge428 Finding the LCD of rational expressions with linear denominators: Common factors
alge429 Finding the LCD of rational expressions with quadratic denominators
alge430 Writing equivalent rational expressions with monomial denominators
alge431 Writing equivalent rational expressions with polynomial denominators
alge304 Writing equivalent rational expressions involving opposite factors
alge433 Adding rational expressions with common denominators and monomial numerators
alge056 Adding rational expressions with common denominators and binomial numerators
alge434 Adding rational expressions with common denominators and GCF factoring
alge435 Adding rational expressions with common denominators and quadratic factoring
alge436 Adding rational expressions with different denominators and a single occurrence of a variable
alge437 Adding rational expressions with denominators ax and bx : Basic
alge438 Adding rational expressions with denominators ax and bx : Advanced
alge439 Adding rational expressions with denominators axn and bxm
alge440 Adding rational expressions with multivariate monomial denominators: Basic
alge226 Adding rational expressions with multivariate monomial denominators: Advanced
alge441 Adding rational expressions with linear denominators without common factors: Basic
alge442 Adding rational expressions with linear denominators without common factors: Advanced
alge443 Adding rational expressions with linear denominators with common factors: Basic
alge444 Adding rational expressions with linear denominators with common factors: Advanced
alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
alge661 Adding rational expressions involving different quadratic denominators
alge446 Adding 3 rational expressions with different quadratic denominators
arith696 Complex fraction without variables: Problem type 2
alge470 Complex fraction involving univariate monomials
alge058 Complex fraction involving multivariate monomials
alge471 Complex fraction: GCF factoring
alge472 Complex fraction: Quadratic factoring
alge473 Complex fraction made of sums involving rational expressions: Problem type 1
alge474 Complex fraction made of sums involving rational expressions: Problem type 2
alge475 Complex fraction made of sums involving rational expressions: Problem type 3
alge476 Complex fraction made of sums involving rational expressions: Problem type 4
alge477 Complex fraction made of sums involving rational expressions: Problem type 5
alge478 Complex fraction made of sums involving rational expressions: Problem type 6
alge479 Complex fraction made of sums involving rational expressions: Multivariate
alge480 Complex fraction with negative exponents: Problem type 1
alge481 Complex fraction with negative exponents: Problem type 2
alge162 Complex fraction that contains a complex fraction
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$

alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
 alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic
 alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
 alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
 alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge450 Solving a distance, rate, time problem using a rational equation
 geom133 Ratio of volumes
 alge059 Ordering fractions with variables
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation
 pcalc917 Finding the asymptotes of a rational function: Constant over linear
 pcalc918 Finding the asymptotes of a rational function: Linear over linear
 pcalc790 Finding horizontal and vertical asymptotes of a rational function: Quadratic numerator or denominator
 alge515 Graphing a rational function: Constant over linear
 alge516 Graphing a rational function: Linear over linear
 pcalc109 Graphing a rational function: Quadratic over linear
 pcalc792 Graphing rational functions with holes
 pcalc791 Matching graphs with rational functions: Two vertical asymptotes
 alge783 Solving a rational inequality: Problem type 1
 pcalc677 Solving a rational inequality: Problem type 2

Radicals

alge413 Finding all square roots of a number
 arith602 Estimating a square root
 arith761 Square roots of integers raised to even exponents
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 alge537 Using absolute value to simplify square roots of perfect square monomials
 alge549 Finding n th roots of perfect n th powers with signs
 arith768 Finding the n th root of a perfect n th power fraction
 alge550 Finding the n th root of a perfect n th power monomial
 alge538 Using absolute value to simplify higher radical expressions
 alge539 Table for a square root function
 alge546 Evaluating a cube root function
 alge565 Domain of a square root function: Basic
 alge566 Domain of a square root function: Advanced
 alge547 Domains of higher root functions
 alge543 Graphing a square root function: Problem type 1

alge544 Graphing a square root function: Problem type 2
alge545 Graphing a square root function: Problem type 3
alge548 Graphing a cube root function
alge812 Converting between radical form and exponent form
alge560 Rational exponents: Unit fraction exponents and whole number bases
alge561 Rational exponents: Unit fraction exponents and bases involving signs
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge251 Rational exponents: Negative exponents and fractional bases
alge558 Rational exponents: Product rule
alge559 Rational exponents: Quotient rule
alge773 Rational exponents: Products and quotients with negative exponents
alge562 Rational exponents: Power of a power rule
alge249 Rational exponents: Powers of powers with negative exponents
pcalc682 Evaluating functions: Absolute value, rational, radical
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
alge275 Simplifying a radical expression with two variables
alge273 Simplifying a higher root of a whole number
alge551 Introduction to simplifying a higher radical expression
alge552 Simplifying a higher radical expression: Univariate
alge811 Simplifying a higher radical expression: Multivariate
arith032 Square root addition or subtraction
alge533 Square root addition or subtraction with three terms
alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
alge532 Simplifying a sum or difference of radical expressions: Univariate
alge084 Simplifying a sum or difference of radical expressions: Multivariate
alge554 Simplifying a sum or difference of higher roots
alge555 Simplifying a sum or difference of higher radical expressions
alge522 Introduction to simplifying a product of radical expressions: Univariate
alge523 Simplifying a product of radical expressions: Univariate
alge640 Simplifying a product of radical expressions: Multivariate
alge082 Simplifying a product of radical expressions: Multivariate, fractional expressions
alge556 Introduction to simplifying a product of higher roots
alge557 Simplifying a product of higher radical expressions
alge526 Simplifying a product involving square roots using the distributive property: Basic
alge276 Simplifying a product involving square roots using the distributive property: Advanced
alge774 Special products of radical expressions: Conjugates and squaring
alge984 Classifying sums and products as rational or irrational
alge527 Rationalizing a denominator: Quotient involving square roots
alge528 Rationalizing a denominator: Square root of a fraction
alge529 Rationalizing a denominator: Quotient involving a monomial
alge534 Rationalizing a denominator using conjugates: Integer numerator
alge535 Rationalizing a denominator using conjugates: Square root in numerator
alge536 Rationalizing a denominator using conjugates: Variable in denominator
alge564 Rationalizing a denominator: Quotient involving a higher radical
alge775 Rationalizing a denominator: Quotient involving higher radicals and monomials
alge563 Simplifying products or quotients of higher radicals with different indices: Univariate
alge776 Simplifying products or quotients of higher radicals with different indices: Multivariate
alge400 Introduction to solving a radical equation
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
alge411 Solving a radical equation with a quadratic expression under the radical
alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
alge412 Algebraic symbol manipulation with radicals
alge542 Word problem involving radical equations: Basic
alge409 Word problem involving radical equations: Advanced
alge410 Solving an equation with a root index greater than 2: Problem type 1

alge417 Solving an equation with a root index greater than 2: Problem type 2
 alge093 Solving an equation using the odd-root property: Problem type 1
 alge228 Solving an equation using the odd-root property: Problem type 2
 alge416 Solving an equation with exponent $1/a$: Problem type 1
 alge418 Solving an equation with exponent $1/a$: Problem type 2
 alge230 Solving an equation with positive rational exponent
 alge231 Solving an equation with negative rational exponent
 alge781 Solving an equation that can be written in quadratic form: Problem type 1
 alge782 Solving an equation that can be written in quadratic form: Problem type 2
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom603 Identifying side lengths that give right triangles
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
 fun019 Sum, difference, and product of two functions
 alge786 Quotient of two functions: Basic
 alge716 Introduction to the composition of two functions
 fun022 Composition of two functions: Basic
 pcalc776 Expressing a function as a composition of two functions
 fun021 Composition of two functions: Domain and range
 alge129 Composition of two functions: Advanced
 pcalc924 Determining whether an equation defines a function: Basic
 pcalc757 Determining whether an equation defines a function: Advanced
 fun011 Horizontal line test
 pcalc777 Determining whether two functions are inverses of each other
 fun012 Inverse functions: Linear, discrete
 alge130 Inverse functions: Rational
 pcalc778 Inverse functions: Quadratic, cubic, radical

Exponential and Logarithmic Functions

alge971 Table for an exponential function
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 alge321 Finding domain and range from the graph of an exponential function
 pcalc922 Translating the graph of an exponential function
 pcalc797 The graph, domain, and range of an exponential function
 pcalc103 Graphing an exponential function and its asymptote: $f(x) = a(e)^{x-b} + c$
 alge830 Evaluating an exponential function that models a real-world situation
 pcalc919 Evaluating an exponential function with base e that models a real-world situation
 arith853 Introduction to compound interest
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 mstat103 Choosing an exponential model and using it to make a prediction
 alge993 Comparing linear, polynomial, and exponential functions
 alge108 Converting between logarithmic and exponential equations
 pcalc799 Converting between natural logarithmic and exponential equations
 alge232 Evaluating a logarithmic expression
 alge233 Solving an equation of the form $\log_b a = c$
 pcalc923 Translating the graph of a logarithmic function
 alge788 Graphing a logarithmic function: Basic
 pcalc800 The graph, domain, and range of a logarithmic function
 pcalc104 Graphing a logarithmic function: Advanced
 pcalc708 Basic properties of logarithms
 pcalc779 Expanding a logarithmic expression: Problem type 1
 pcalc780 Expanding a logarithmic expression: Problem type 2

alge787 Writing an expression as a single logarithm
 pcalc612 Change of base for logarithms: Problem type 1
 pcalc613 Change of base for logarithms: Problem type 2
 pcalc803 Solving a multi-step equation involving a single logarithm
 pcalc804 Solving a multi-step equation involving natural logarithms
 pcalc805 Solving an equation involving logarithms on both sides: Problem type 2
 alge113 Solving an equation involving logarithms on both sides: Problem type 1
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge482 Solving an exponential equation by finding common bases: Linear and quadratic exponents
 pcalc920 Solving an exponential equation by using logarithms: Decimal answers, basic
 pcalc921 Solving an exponential equation by using natural logarithms: Decimal answers
 alge111 Solving an exponential equation by using logarithms: Exact answers in logarithmic form
 pcalc806 Using a graphing calculator to solve an exponential or logarithmic equation
 alge178 Finding the time to reach a limit in a word problem on exponential growth or decay
 pcalc614 Finding the initial or final amount in a word problem on exponential growth or decay
 pcalc615 Finding the rate or time in a word problem on continuous exponential growth or decay

Sequences and Conics

alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 pcalc080 Finding the first terms of a sequence using an explicit rule with multiple occurrences of n
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 pcalc715 Finding a specified term of an arithmetic sequence given two terms of the sequence
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence
 pcalc718 Sum of the first n terms of an arithmetic sequence
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc717 Finding a specified term of a geometric sequence given two terms of the sequence
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 pcalc719 Sum of the first n terms of a geometric sequence
 pcalc720 Sum of an infinite geometric series
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 pcalc067 Graphing a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 geom494 Deriving the equation of a parabola given its focus and directrix
 pcalc068 Writing an equation of a parabola given the vertex and the focus
 pcalc069 Finding the focus of a parabola of the form $ay^2 + by + cx + d = 0$ or $ax^2 + bx + cy + d = 0$
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter

geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 pcalc734 Graphing an ellipse given its equation in standard form
 pcalc070 Graphing an ellipse centered at the origin: $Ax^2 + By^2 = C$
 pcalc071 Graphing an ellipse given its equation in general form
 pcalc072 Finding the foci of an ellipse given its equation in general form
 pcalc074 Writing an equation of an ellipse given the center, an endpoint of an axis, and the length of the other axis
 pcalc735 Graphing a hyperbola given its equation in standard form
 pcalc075 Graphing a hyperbola centered at the origin: $Ax^2 - By^2 - C = 0$
 pcalc076 Graphing a hyperbola given its equation in general form
 pcalc077 Finding the foci of a hyperbola given its equation in general form
 pcalc078 Writing an equation of a hyperbola given the foci and the vertices
 pcalc736 Classifying conics given their equations
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 pcalc796 Using a graphing calculator to solve a system of equations
 pcalc098 Solving a system of nonlinear equations: Problem type 1
 pcalc096 Graphing a system of nonlinear inequalities: Problem type 1
 pcalc097 Graphing a system of nonlinear inequalities: Problem type 2

Statistics and Probability

mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat047 Introduction to expectation
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 stat805 Making a reasonable inference based on proportion statistics
 mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 geom814 Angle measure in a circle graph
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 stat009 Percentiles
 mstat042 Interpreting a Venn diagram of 2 sets
 mstat043 Interpreting a Venn diagram of 3 sets
 stat119 Venn diagrams: Two events
 stat101 Venn diagrams: Word problems
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 pcalc809 Introduction to permutations and combinations

pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 pcalc090 Permutations and combinations: Problem type 3
 pcalc087 Binomial formula
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 mstat010 Probability of an event
 mstat046 Experimental and theoretical probability
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat116 Probabilities of a permutation and a combination
 mstat011 Area as probability
 mstat019 Identifying independent events given descriptions of experiments
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 mstat115 Determining outcomes for compound events and complements of events
 mstat110 Using a Venn diagram to understand the multiplication rule for probability
 mstat107 Outcomes and event probability: Conditional probability
 mstat104 Identifying independent events given values of probabilities
 mstat105 Computing conditional probability using a two-way frequency table
 mstat106 Computing conditional probability to make an inference using a two-way frequency table
 mstat118 Conditional probability: Basic
 mstat109 Using a Venn diagram to understand the addition rule for probability
 mstat108 Outcomes and event probability: Addition rule
 mstat032 Probability of the union of two events
 mstat117 Probability of intersection or union: Word problems
 stat174 Binomial problems: Basic
 stat155 Binomial problems: Advanced
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat114 Using a random number table to make a fair decision
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 stat021 Population standard deviation
 stat852 Word problem involving calculations from a normal distribution

Trigonometry

pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle
 geom860 Special right triangles: Decimal answers
 geom506 Special right triangles: Exact answers
 pcalc001 Converting degrees-minutes-seconds to decimal degrees
 pcalc661 Converting a decimal degree to degrees-minutes-seconds
 pcalc002 Converting between degree and radian measure: Problem type 1
 pcalc621 Converting between degree and radian measure: Problem type 2

pcalc006 Sketching an angle in standard position
 pcalc622 Coterminal angles
 pcalc005 Arc length and central angle measure
 pcalc623 Area of a sector of a circle
 pcalc627 Finding coordinates on the unit circle for special angles
 pcalc629 Trigonometric functions and special angles: Problem type 1
 pcalc628 Finding trigonometric ratios from a point on the unit circle
 pcalc630 Trigonometric functions and special angles: Problem type 2
 pcalc631 Trigonometric functions and special angles: Problem type 3
 pcalc626 Reference angles: Problem type 1
 pcalc632 Reference angles: Problem type 2
 pcalc671 Determining the location of a terminal point given the signs of trigonometric values
 pcalc011 Finding values of trigonometric functions given information about an angle: Problem type 1
 pcalc012 Finding values of trigonometric functions given information about an angle: Problem type 2
 pcalc013 Finding values of trigonometric functions given information about an angle: Problem type 3
 pcalc016 Values of inverse trigonometric functions
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom409 Proving the law of cosines
 geom439 Using trigonometry to find the area of a right triangle
 pcalc646 Finding the area of a triangle using trigonometry
 geom319 Expressing the area of a triangle in terms of the sine of one of its angles
 pcalc647 Heron's formula
 pcalc107 Sketching the graph of $y = a \sin(x+c)$ or $y = a \cos(x+c)$
 pcalc106 Sketching the graph of $y = a \sin(bx)$ or $y = a \cos(bx)$
 pcalc014 Sketching the graph of $y = a \sin(bx+c)$ or $y = a \cos(bx+c)$
 pcalc633 Amplitude and period of sine and cosine functions
 pcalc634 Amplitude, period, and phase shift of sine and cosine functions
 pcalc635 Writing the equation of a sine or cosine function given its graph: Problem type 1
 pcalc636 Writing the equation of a sine or cosine function given its graph: Problem type 2
 pcalc640 Word problem involving a sine or cosine function: Problem type 1
 pcalc641 Word problem involving a sine or cosine function: Problem type 2
 pcalc637 Matching graphs and equations for secant, cosecant, tangent, and cotangent functions
 pcalc017 Sketching the graph of a secant or cosecant function: Problem type 1
 pcalc638 Sketching the graph of a secant or cosecant function: Problem type 2
 pcalc105 Sketching the graph of a tangent or cotangent function: Problem type 1
 pcalc015 Sketching the graph of a tangent or cotangent function: Problem type 2
 pcalc648 Simplifying trigonometric expressions
 pcalc666 Using cofunction identities
 pcalc110 Verifying a trigonometric identity
 pcalc034 Proving trigonometric identities: Problem type 1
 pcalc404 Proving trigonometric identities: Problem type 2
 pcalc405 Proving trigonometric identities: Problem type 3
 pcalc406 Proving trigonometric identities using odd and even properties
 pcalc029 Sum and difference identities: Problem type 1
 pcalc663 Sum and difference identities: Problem type 2
 pcalc664 Sum and difference identities: Problem type 3
 pcalc403 Proving trigonometric identities using sum and difference properties
 pcalc030 Double-angle identities: Problem type 1
 pcalc667 Double-angle identities: Problem type 2
 pcalc662 Half-angle identities: Problem type 1
 pcalc665 Half-angle identities: Problem type 2
 pcalc402 Proving trigonometric identities using double-angle properties
 pcalc650 Finding solutions in an interval for a basic equation involving sine or cosine
 pcalc651 Finding solutions in an interval for a basic tangent, cotangent, secant, or cosecant equation
 pcalc660 Solving a basic trigonometric equation using a calculator
 pcalc020 Solving a basic trigonometric equation involving sine or cosine
 pcalc021 Solving a basic trigonometric equation involving tangent, cotangent, secant, or cosecant

pcalc670 Finding solutions in an interval for a trigonometric equation in factored form
 pcalc652 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 1
 pcalc653 Finding solutions in an interval for a trigonometric equation with a squared function: Problem type 2
 pcalc654 Finding solutions in an interval for a trigonometric equation using Pythagorean identities: Problem type 1
 pcalc657 Finding solutions in an interval for an equation with sine and cosine using double-angle identities
 pcalc668 Solving a trigonometric equation modeling a real-world situation
 pcalc811 Using a graphing calculator to solve a trigonometric equation
 pcalc022 Solving a trigonometric equation involving a squared function: Problem type 1
 pcalc023 Solving a trigonometric equation involving a squared function: Problem type 2
 pcalc024 Solving a trigonometric equation involving more than one function
 pcalc027 Solving a trigonometric equation using double-angle identities
 pcalc060 Magnitude of a vector given in component form
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 pcalc063 Translation of a vector
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph
 vector009 Dot product of vectors given in component form
 vector010 Using the dot product to find perpendicular vectors
 pcalc730 Finding the angle between two vectors given in component form

B.92 CC Math 6 Tutorial Lab (Intervention)

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith001 Addition without carry
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith636 Subtracting a 1-digit number from a 2-digit number
 arith007 Subtraction without borrowing
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith653 Fact families for addition and subtraction
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith008 One-digit multiplication
 arith639 Using multiplication to find the number of squares
 arith679 Multiplication by 10, 100, and 1000
 arith003 Multiplication without carry
 arith004 Multiplication with carry
 arith632 Multiplication with trailing zeros: Problem type 1
 arith615 Introduction to multiplication of large numbers

arith675 Understanding multiplication of a one-digit number with a larger number
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith654 Fact families for multiplication and division
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith052 Division without carry
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division

alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge649 Evaluating a formula
 alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge803 Using two steps to solve an equation with whole numbers
 alge016 Translating a sentence into a one-step equation
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid

Decimals

arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith668 Addition with money
 arith669 Subtraction with money
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith135 Word problem with multiplication of a decimal and a whole number
 arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
 arith019 Division of a decimal by a 2-digit decimal

arith083 Division of a decimal by a power of ten
 arith742 Division of a decimal by a power of 0.1
 arith745 Decimal division with rounding
 arith136 Word problem with division of a decimal and a whole number
 arith138 Word problem with division of two decimals
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith103 Average of two numbers
 arith753 Squaring decimal bases: Products greater than 0.1
 arith741 Exponents and decimals: Products less than 0.1
 arith720 Order of operations with decimals: Problem type 1
 arith746 Order of operations with decimals: Problem type 2
 arith747 Order of operations with decimals: Problem type 3
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
 arith509 Modeling multiplication of proper fractions
 arith813 Multiplication of 3 fractions
 arith818 Word problem involving fractions and multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith507 Fact families for multiplication and division of fractions
 arith508 Modeling division of a whole number by a fraction
 arith819 Word problem involving fractions and division
 arith618 Addition or subtraction of fractions with the same denominator
 arith802 Addition or subtraction of fractions with the same denominator and simplification
 arith801 Finding the LCD of two fractions
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing

arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith127 Writing a decimal and a fraction for a shaded region
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith513 Identifying rational decimal numbers
 arith821 Exponents and fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge281 Function tables with one-step rules
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship

alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10

arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 arith232 Finding simple interest without a calculator
 arith918 Comparing discounts
 arith914 Calculations involving paying for college
 arith916 Computing percentages for categories of a budget
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score

Integers and Rational Numbers

alge286 Plotting integers on a number line
 mstat038 Reading the temperature from a thermometer
 arith691 Ordering integers
 arith415 Using a number line to compare integers
 arith699 Writing a signed number for a real-world situation
 arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
 arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
 arith416 Comparing signed numbers relating to a real-world situation
 arith402 Plotting opposite integers on a number line
 arith403 Finding opposites of integers
 arith071 Absolute value of a number
 arith412 Finding all numbers with a given absolute value
 arith605 Plotting rational numbers on a number line
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith431 Identifying a sum as a point located a given distance from another point
 arith430 Identifying relative change when combining two quantities
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2

arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith755 Addition and subtraction with 4 or 5 integers
 arith440 Operations with absolute value: Problem type 1
 arith104 Operations with absolute value: Problem type 2
 alge694 Computing the distance between two integers on a number line
 arith433 Computing and understanding distances between integers on a number line
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith952 Word problem with multiplication or division of integers
 arith702 Exponents and integers: Problem type 1
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith750 Signed decimal multiplication
 arith751 Signed decimal division
 alge660 Identifying equivalent signed fractions
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 geom525 Computing distances between decimals on the number line
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge001 Identifying numbers as integers or non-integers
 alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge665 Combining like terms: Decimal coefficients
 alge666 Combining like terms: Fractional coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression

Equations and Inequalities

alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions

alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge658 Introduction to solving a rational equation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge014 Solving a word problem with two unknowns using a linear equation
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge636 Solving a two-step linear inequality with whole numbers
 alge846 Translating a sentence into a multi-step inequality
 alge621 Solving a word problem using a one-step linear inequality
 alge623 Solving a word problem using a two-step linear inequality

Graphs and Functions

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 arith454 Making a table and plotting points given a unit rate
 alge283 Graphing whole number functions
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun001 Table for a linear function
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1

alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x- and y-intercepts given the graph of a line on a grid
 mstat007 Interpreting a line graph
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge263 Interpreting the graphs of two functions
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side

geom812 Finding an angle measure given extended triangles
geom813 Finding an angle measure given a triangle and parallel lines
geom519 Identifying and naming congruent parts of congruent triangles
geom543 Drawing a circle with a given radius or diameter
geom544 Creating triangles from given side lengths: Problem type 1
geom634 Creating triangles from given side lengths: Problem type 2
geom844 Using triangle inequality to determine if side lengths form a triangle
geom548 Determining if a triangle is possible based on given angle measures
geom546 Drawing triangles with given conditions: Angle measures
geom547 Drawing triangles with given conditions: Side lengths and angle measures
geom545 Drawing triangles with given side lengths using a compass
geom361 Naming polygons
mstat042 Interpreting a Venn diagram of 2 sets
geom536 Drawing and identifying a polygon in the coordinate plane
geom867 Identifying parallelograms, rectangles, and squares
geom310 Properties of quadrilaterals
geom532 Classifying parallelograms
geom818 Finding the coordinates of a point to make a parallelogram
geom870 Sum of the angle measures of a quadrilateral
geom852 The sum of interior angle measures in a convex polygon
arith016 Square root of a perfect square
alge413 Finding all square roots of a number
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge407 Introduction to the Pythagorean Theorem
geom044 Pythagorean Theorem
alge408 Word problem involving the Pythagorean Theorem
geom603 Identifying side lengths that give right triangles

Transformations

geom357 Identifying transformations
geom355 Introduction to translations
geom596 Translating a point and giving its coordinates: One step
geom909 Translating a point and giving its coordinates: Two steps
geom597 Properties of translated figures
geom598 Determining if figures are related by a translation
geom330 Translating a polygon
geom356 Introduction to reflections
arith408 Reflecting a point across an axis
geom533 Reflecting a point across both coordinate axes
geom590 Reflecting a point across an axis and giving its coordinates
arith407 Finding the coordinates of a point reflected across an axis
geom560 Finding the coordinates of a point reflected across both axes
geom534 Reflecting a polygon across the x-axis or y-axis
geom591 Properties of reflected figures
geom592 Determining if figures are related by a reflection
geom332 Reflecting a polygon over a vertical or horizontal line
geom334 Drawing lines of symmetry
geom602 Finding the coordinates of a point reflected across an axis and translated
geom815 Finding an angle of rotation
geom624 Identifying rotational symmetry and angles of rotation
geom593 Rotating a point and giving its coordinates
geom594 Properties of rotated figures
geom595 Determining if figures are related by a rotation
geom335 Rotating a figure about the origin
geom580 Determining if figures are congruent and related by a transformation
geom606 Dilating a segment and giving the coordinates of its endpoints
geom607 The effect of dilation on side length
geom608 Determining if figures are related by a dilation

geom636 The effect of dilation on area

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom832 Area of quadrilaterals in the coordinate plane
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom311 Volume of a rectangular prism
 geom354 Volume of a rectangular prism made of unit cubes
 geom518 Volume of a solid made of cubes with unit fraction edge lengths
 geom535 Volume of a rectangular prism with fractional edge lengths
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom035 Volume of a cylinder

geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation

mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events

B.93 CC Math 7 Tutorial Lab (Intervention)

Whole Numbers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith633 One-digit addition with carry
 arith634 Addition of 3 or 4 one-digit numbers
 arith001 Addition without carry
 arith635 Adding a 2-digit number and a 1-digit number with carry
 arith050 Addition with carry
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith636 Subtracting a 1-digit number from a 2-digit number
 arith007 Subtraction without borrowing
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith653 Fact families for addition and subtraction
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith008 One-digit multiplication
 arith639 Using multiplication to find the number of squares
 arith679 Multiplication by 10, 100, and 1000
 arith003 Multiplication without carry

arith004 Multiplication with carry
arith632 Multiplication with trailing zeros: Problem type 1
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith638 Multiplication with trailing zeros: Problem type 2
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith075 Division facts
arith654 Fact families for multiplication and division
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith052 Division without carry
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith680 Division with trailing zeros: Problem type 1
arith649 Division with trailing zeros: Problem type 2
arith616 Quotient and remainder: Problem type 1
arith644 Word problem on quotient and remainder
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith016 Square root of a perfect square
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers

arith418 Word problem involving the least common multiple of 2 numbers
 arith240 Word problem with common multiples
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge649 Evaluating a formula
 alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge813 Introduction to solving an equation with multiplication or division
 alge008 Multiplicative property of equality with whole numbers
 alge016 Translating a sentence into a one-step equation
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid

Decimals

arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith624 Addition of aligned decimals
 arith013 Decimal addition with 3 numbers
 arith734 Subtraction of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith737 Decimal addition and subtraction with 3 or more numbers
 arith131 Estimating a decimal sum or difference
 arith668 Addition with money
 arith669 Subtraction with money
 arith132 Word problem with addition or subtraction of 2 decimals
 arith133 Word problem with addition of 3 or 4 decimals and whole numbers
 arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith135 Word problem with multiplication of a decimal and a whole number
 arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers

arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry

arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith127 Writing a decimal and a fraction for a shaded region
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith513 Identifying rational decimal numbers
 arith821 Exponents and fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge281 Function tables with one-step rules
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$

arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50

arith843 Using a calculator to convert a fraction to a rounded percentage
arith842 Converting a fraction to a percentage in a real-world situation
arith840 Finding a percentage of a whole number
arith030 Finding a percentage of a whole number without a calculator: Basic
arith844 Finding a percentage of a whole number without a calculator: Advanced
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith845 Finding a percentage of a total amount: Real-world situations
arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
arith857 Estimating a tip without a calculator
arith069 Writing a ratio as a percentage without a calculator
arith850 Finding the rate of a tax or commission
arith849 Finding the total amount given the percentage of a partial amount
stat805 Making a reasonable inference based on proportion statistics
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
arith232 Finding simple interest without a calculator
arith918 Comparing discounts
arith914 Calculations involving paying for college
arith916 Computing percentages for categories of a budget
arith921 Comparing annual salaries of different occupations
arith911 Calculations involving purchases with debit and credit cards
arith950 Comparing costs of checking accounts
arith951 Balancing a check register
arith912 Reading a credit report
arith913 Understanding the impact of a credit score

Integers and Rational Numbers

alge286 Plotting integers on a number line
mstat038 Reading the temperature from a thermometer
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith605 Plotting rational numbers on a number line
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers

arith755 Addition and subtraction with 4 or 5 integers
 arith440 Operations with absolute value: Problem type 1
 arith104 Operations with absolute value: Problem type 2
 alge694 Computing the distance between two integers on a number line
 arith433 Computing and understanding distances between integers on a number line
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith952 Word problem with multiplication or division of integers
 arith702 Exponents and integers: Problem type 1
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers
 arith750 Signed decimal multiplication
 arith751 Signed decimal division
 alge660 Identifying equivalent signed fractions
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 geom525 Computing distances between decimals on the number line
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge001 Identifying numbers as integers or non-integers
 alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge665 Combining like terms: Decimal coefficients
 alge666 Combining like terms: Fractional coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression

Equations and Inequalities

alge800 Additive property of equality with decimals
 alge801 Additive property of equality with fractions and mixed numbers
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions

alge825 Multiplicative property of equality with decimals
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge658 Introduction to solving a rational equation
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge014 Solving a word problem with two unknowns using a linear equation
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge166 Graphing a compound inequality on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge636 Solving a two-step linear inequality with whole numbers
 alge846 Translating a sentence into a multi-step inequality
 alge621 Solving a word problem using a one-step linear inequality
 alge623 Solving a word problem using a two-step linear inequality

Graphs and Functions

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 arith454 Making a table and plotting points given a unit rate
 alge283 Graphing whole number functions
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun001 Table for a linear function
 fun005 Writing a function rule given a table of ordered pairs: One-step rules

fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 mstat007 Interpreting a line graph
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge263 Interpreting the graphs of two functions
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom358 Identifying parallel and perpendicular lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines

geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom519 Identifying and naming congruent parts of congruent triangles
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon
 alge413 Finding all square roots of a number
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom603 Identifying side lengths that give right triangles

Transformations

geom357 Identifying transformations
 geom355 Introduction to translations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom356 Introduction to reflections
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation

geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom832 Area of quadrilaterals in the coordinate plane
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom311 Volume of a rectangular prism
 geom354 Volume of a rectangular prism made of unit cubes
 geom518 Volume of a solid made of cubes with unit fraction edge lengths
 geom535 Volume of a rectangular prism with fractional edge lengths
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom033 Volume of a pyramid

geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom035 Volume of a cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median

mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events

B.94 CC Math 8 Tutorial Lab (Intervention)

Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith004 Multiplication with carry
 arith615 Introduction to multiplication of large numbers
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith014 Multiplication of large numbers
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith614 Word problem with multiplication or division of whole numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers

arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith016 Square root of a perfect square
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities

arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith755 Addition and subtraction with 4 or 5 integers
 arith440 Operations with absolute value: Problem type 1
 arith104 Operations with absolute value: Problem type 2
 alge694 Computing the distance between two integers on a number line
 arith433 Computing and understanding distances between integers on a number line
 arith701 Word problem with addition or subtraction of integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith952 Word problem with multiplication or division of integers
 arith702 Exponents and integers: Problem type 1
 arith703 Exponents and integers: Problem type 2
 arith118 Order of operations with integers
 arith600 Order of operations with integers and exponents
 alge284 Evaluating an algebraic expression: Whole number addition or subtraction
 alge683 Evaluating an algebraic expression: Whole number multiplication or division
 alge285 Evaluating an algebraic expression: Whole numbers with two operations
 alge649 Evaluating a formula
 alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid
 geom311 Volume of a rectangular prism
 alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge010 Additive property of equality with integers
 alge008 Multiplicative property of equality with whole numbers
 alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 alge660 Identifying equivalent signed fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
 arith509 Modeling multiplication of proper fractions

arith813 Multiplication of 3 fractions
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith818 Word problem involving fractions and multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith507 Fact families for multiplication and division of fractions
 arith508 Modeling division of a whole number by a fraction
 arith814 Signed fraction division
 arith819 Word problem involving fractions and division
 arith618 Addition or subtraction of fractions with the same denominator
 arith802 Addition or subtraction of fractions with the same denominator and simplification
 alge432 Introduction to adding fractions with variables and common denominators
 arith801 Finding the LCD of two fractions
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith605 Plotting rational numbers on a number line
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 alge790 Evaluating expressions with exponents of zero
 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

Decimals

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths

arith220 Decimal place value: Hundreds to ten thousandths
arith714 Writing a decimal number less than 1 given its name
arith715 Writing a decimal number greater than 1 given its name
arith716 Writing a decimal number given its name: Advanced
arith829 Reading decimal position on a number line: Tenths
arith830 Reading decimal position on a number line: Hundredths
arith831 Understanding decimal position on a number line using zoom: Hundredths
arith832 Understanding decimal position on a number line using zoom: Thousandths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith221 Rounding decimals
arith717 Converting a decimal to a proper fraction without simplifying: Basic
arith719 Converting a decimal to a proper fraction without simplifying: Advanced
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
geom525 Computing distances between decimals on the number line
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith750 Signed decimal multiplication
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith751 Signed decimal division
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic

arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 arith513 Identifying rational decimal numbers
 alge001 Identifying numbers as integers or non-integers
 arith753 Squaring decimal bases: Products greater than 0.1
 arith741 Exponents and decimals: Products less than 0.1
 arith720 Order of operations with decimals: Problem type 1
 arith746 Order of operations with decimals: Problem type 2
 arith747 Order of operations with decimals: Problem type 3
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions
 arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches

mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded
 arith903 Representing benchmark percentages on a grid
 arith723 Introduction to converting a percentage to a decimal
 arith833 Introduction to converting a decimal to a percentage
 arith834 Converting between percentages and decimals
 arith841 Converting a mixed number percentage to a decimal
 arith835 Converting between percentages and decimals in a real-world situation
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
 arith904 Finding benchmark fractions and percentages for a figure
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith842 Converting a fraction to a percentage in a real-world situation
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 arith849 Finding the total amount given the percentage of a partial amount
 stat805 Making a reasonable inference based on proportion statistics
 stat804 Interpreting a circle graph or pie chart
 arith856 Finding a percentage of a total amount in a circle graph
 stat801 Computations from a circle graph

arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 arith915 Calculating income tax
 arith918 Comparing discounts
 arith909 Examining a savings plan for college
 arith914 Calculations involving paying for college
 arith920 Comparing total costs for attending different colleges
 arith922 Distinguishing between fixed and variable expenses
 arith916 Computing percentages for categories of a budget
 arith919 Computations involving cost of living and hourly wage
 arith921 Comparing annual salaries of different occupations
 arith911 Calculations involving purchases with debit and credit cards
 arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score
 arith917 Computing a person's net worth
 arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
 arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
 arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
 arith910 Calculating and comparing simple interest and compound interest

Equations and Inequalities

alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression

alge920 Introduction to solving an equation with parentheses
alge837 Solving a multi-step equation given in fractional form
alge986 Identifying properties used to solve a linear equation
alge824 Solving a two-step equation with signed decimals
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
alge208 Solving a two-step equation with signed fractions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge742 Solving equations with zero, one, or infinitely many solutions
alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge603 Introduction to solving an absolute value equation
alge864 Solving an absolute value equation: Problem type 1
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge016 Translating a sentence into a one-step equation
alge671 Choosing stories that can be represented by given one-step equations
alge841 Translating a sentence into a multi-step equation
alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
alge618 Comparing arithmetic and algebraic solutions to a word problem
alge672 Choosing stories that can be represented by given two-step equations
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
alge014 Solving a word problem with two unknowns using a linear equation
alge673 Writing an equation to represent a real-world problem: Variable on both sides
alge674 Writing and solving a real-world problem given an equation with the variable on both sides
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
alge796 Solving a distance, rate, time problem using a linear equation
alge015 Translating a sentence by using an inequality symbol
alge845 Translating a sentence into a one-step inequality
alge653 Introduction to identifying solutions to an inequality
alge748 Writing an inequality for a real-world situation
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge847 Writing a compound inequality given a graph on the number line

alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality

Graphing, Functions, and Sequences

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge191 Midpoint of a line segment in the plane
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge280 Graphing a line in quadrant 1
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge874 Identifying linear functions given ordered pairs
 geom358 Identifying parallel and perpendicular lines
 mstat007 Interpreting a line graph
 arith454 Making a table and plotting points given a unit rate
 arith501 Identifying proportional relationships in graphs: Basic
 arith502 Identifying proportional relationships in graphs: Advanced
 arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation

alge699 Comparing proportional relationships given in different forms
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y-intercept
 alge196 Graphing a line through a given point with a given slope
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 alge625 Identifying linear equations: Basic
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function no-

tation

alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation

alge990 Domain and range of a linear function that models a real-world situation

fun026 Finding an output of a function from its graph

pcalc761 Finding inputs and outputs of a function from its graph

fun007 Domain and range from the graph of a discrete relation

alge896 Graphing an integer function and finding its range for a given domain

alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope

alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope

alge999 Finding where a function is increasing, decreasing, or constant given the graph

mstat018 Choosing a graph to fit a narrative: Basic

mstat051 Choosing a graph to fit a narrative: Advanced

alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$

alge900 Graphing an absolute value equation in the plane: Basic

alge168 Graphing an absolute value equation in the plane: Advanced

alge954 Graphing a parabola of the form $y = ax^2$

alge955 Graphing a parabola of the form $y = ax^2 + c$

alge262 Graphing a cubic function of the form $y = ax^3$

alge925 Finding the next terms of an arithmetic sequence with whole numbers

alge933 Finding the next terms of a geometric sequence with whole numbers

alge732 Finding patterns in shapes

alge644 Finding the first terms of an arithmetic sequence using an explicit rule

alge645 Finding the first terms of a geometric sequence using an explicit rule

alge906 Finding the next terms of an arithmetic sequence with integers

alge979 Identifying arithmetic sequences and finding the common difference

alge931 Finding a specified term of an arithmetic sequence given the first terms

pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term

alge909 Writing an explicit rule for an arithmetic sequence

alge907 Finding the next terms of a geometric sequence with signed numbers

alge981 Identifying arithmetic and geometric sequences

alge980 Identifying geometric sequences and finding the common ratio

alge934 Finding a specified term of a geometric sequence given the first terms

pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term

pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule

alge914 Identifying solutions to a system of linear equations

alge725 Graphically solving a system of linear equations

alge815 Introduction to using substitution to solve a linear equation

alge816 Solving a system of linear equations of the form $y = mx + b$

alge751 Solving a system of linear equations using substitution

alge915 Solving a system of linear equations using elimination with addition

alge076 Solving a system of linear equations using elimination with multiplication and addition

alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions

alge263 Interpreting the graphs of two functions

alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations

alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$

alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$

alge184 Solving a value mixture problem using a system of linear equations

pcalc038 Addition or subtraction of matrices

alge912 Identifying solutions to a linear inequality in two variables

alge225 Graphing a linear inequality in the plane: Vertical or horizontal line

alge720 Graphing a linear inequality in the plane: Slope-intercept form

alge018 Graphing a linear inequality in the plane: Standard form

alge079 Graphing a system of two linear inequalities: Basic

alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base

alge821 Understanding the product rule of exponents

alge024 Introduction to the product rule of exponents

alge311 Product rule with positive exponents: Univariate
alge030 Product rule with positive exponents: Multivariate
alge690 Introduction to the power of a power rule with positive exponents: Whole number base
alge826 Understanding the power rules of exponents
alge306 Introduction to the power of a power rule of exponents
alge305 Introduction to the power of a product rule of exponents
alge307 Power rules with positive exponents: Multivariate products
alge308 Power rules with positive exponents: Multivariate quotients
alge451 Simplifying a ratio of multivariate monomials: Basic
alge688 Introduction to the quotient rule with positive exponents: Whole number base
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
arith029 Ordering numbers with positive exponents
arith684 Power of 10: Negative exponent
arith729 Evaluating an expression with a negative exponent: Whole number base
arith042 Evaluating an expression with a negative exponent: Positive fraction base
arith043 Evaluating an expression with a negative exponent: Negative integer base
arith024 Ordering numbers with negative exponents
alge791 Rewriting an algebraic expression without a negative exponent
alge687 Introduction to the product rule with negative exponents: Whole number base
alge961 Introduction to the product rule with negative exponents
alge689 Introduction to the quotient rule with negative exponents: Whole number base
alge755 Quotient rule with negative exponents: Problem type 1
alge691 Introduction to the power of a power rule with negative exponents: Whole number base
alge025 Power of a power rule with negative exponents
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot025 Estimating numbers using scientific notation
scinot020 Choosing metric units and converting to the base unit in scientific notation
scinot021 Expressing calculator notation as scientific notation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
scinot017 Estimating the sum or difference of two numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge032 Squaring a binomial: Univariate
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1

alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 arith601 Square root of a rational perfect square
 alge413 Finding all square roots of a number
 arith760 Square roots of perfect squares with signs
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 alge567 Using numerical methods to approximate a square root to the nearest tenth
 alge568 Using numerical methods to approximate a square root to the nearest hundredth
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 arith514 Converting a repeating decimal to a fraction
 arith432 Identifying true statements about rational and irrational numbers
 alge002 Identifying numbers as rational or irrational
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment

geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis

geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom832 Area of quadrilaterals in the coordinate plane
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom016 Circumference of a circle

geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom126 Area of a sector of a circle: Exact answer in terms of pi
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom354 Volume of a rectangular prism made of unit cubes
 geom518 Volume of a solid made of cubes with unit fraction edge lengths
 geom535 Volume of a rectangular prism with fractional edge lengths
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom035 Volume of a cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom133 Ratio of volumes
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2

mstat056 Interpreting a tally table
mstat097 Constructing a two-way frequency table: Basic
mstat098 Constructing a two-way frequency table: Advanced
mstat049 Computing a percentage from a table of values
mstat087 Making an inference using a two-way frequency table
stat020 Calculating relative frequencies in a contingency table
mstat025 Finding if a question can be answered by the data
mstat037 Constructing a line plot
mstat005 Constructing a bar graph for non-numerical data
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat057 Interpreting a pictograph table
mstat031 Interpreting a stem-and-leaf plot
geom814 Angle measure in a circle graph
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat093 Classifying linear and nonlinear relationships from scatter plots
mstat071 Linear relationship and the correlation coefficient
mstat096 Identifying outliers and clustering in scatter plots
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat075 Understanding the mean graphically: Two bars
mstat076 Understanding the mean graphically: Four or more bars
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
mstat078 Comparing measures of center and variation
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat090 Comparing sample means
mstat082 Computing mean absolute deviation from a list of numerical values
mstat083 Computing mean absolute deviation from a bar graph
mstat084 Assessing the degree of overlap of two distributions
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
mstat054 Classifying likelihood
mstat026 Introduction to the probability of an event
mstat010 Probability of an event

mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

B.95 CC Algebra 1 Tutorial Lab (Intervention)

Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
 arith125 Whole number place value: Problem type 2
 arith066 Expanded form
 arith643 Expanded form with zeros
 arith028 Numeral translation: Problem type 1
 arith060 Numeral translation: Problem type 2
 arith630 Addition with carry to the hundreds place
 arith012 Addition of large numbers
 arith006 Subtraction with borrowing
 arith682 Subtraction with multiple regrouping steps
 arith637 Subtraction and regrouping with zeros
 arith613 Word problem with addition or subtraction of whole numbers
 mstat061 Describing an increasing or decreasing pattern from a table of values
 arith126 Multiplication as repeated addition
 arith004 Multiplication with carry
 arith615 Introduction to multiplication of large numbers
 arith675 Understanding multiplication of a one-digit number with a larger number
 arith014 Multiplication of large numbers
 arith641 Multiples: Problem type 1
 arith642 Multiples: Problem type 2
 arith614 Word problem with multiplication or division of whole numbers
 arith130 Word problem with multiplication and addition or subtraction of whole numbers
 arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
 arith243 Division of whole numbers given in fractional form
 arith711 Division involving zero
 arith005 Division with carry
 arith901 Whole number division: 2-digit by 2-digit, no remainder
 arith902 Whole number division: 3-digit by 2-digit, no remainder
 arith616 Quotient and remainder: Problem type 1
 arith617 Quotient and remainder: Problem type 2
 arith631 Quotient and remainder: Problem type 3
 arith650 Division involving quotients with intermediate zeros
 arith023 Word problem with division of whole numbers and rounding
 arith651 Introduction to inequalities
 arith652 Comparing a numerical expression with a number
 arith077 Ordering large numbers
 arith078 Rounding to tens or hundreds
 arith123 Rounding to hundreds or thousands
 arith061 Rounding to thousands, ten thousands, or hundred thousands
 arith101 Estimating a sum of whole numbers
 arith102 Estimating a difference of whole numbers
 arith677 Estimating a product

arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations

alge649 Evaluating a formula
 alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
 alge832 Evaluating an algebraic expression: Whole number operations and exponents
 alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
 alge004 Evaluating a quadratic expression: Integers
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 geom339 Perimeter of a polygon
 geom300 Perimeter of a square or a rectangle
 geom019 Area of a square or a rectangle
 geom866 Perimeter and area on a grid
 geom311 Volume of a rectangular prism
 alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge010 Additive property of equality with integers
 alge008 Multiplicative property of equality with whole numbers
 alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
 arith665 Understanding equivalent fractions
 arith212 Equivalent fractions
 arith666 Introduction to simplifying a fraction
 arith067 Simplifying a fraction
 alge660 Identifying equivalent signed fractions
 arith687 Fractional position on a number line
 arith667 Plotting fractions on a number line
 arith044 Ordering fractions with the same denominator
 arith091 Ordering fractions with the same numerator
 arith092 Using a common denominator to order fractions
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith119 Introduction to fraction multiplication
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
 arith509 Modeling multiplication of proper fractions
 arith813 Multiplication of 3 fractions
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith818 Word problem involving fractions and multiplication
 arith095 Multi-step word problem involving fractions and multiplication
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith507 Fact families for multiplication and division of fractions
 arith508 Modeling division of a whole number by a fraction
 arith814 Signed fraction division
 arith819 Word problem involving fractions and division
 arith618 Addition or subtraction of fractions with the same denominator
 arith802 Addition or subtraction of fractions with the same denominator and simplification
 alge432 Introduction to adding fractions with variables and common denominators
 arith801 Finding the LCD of two fractions
 arith109 Addition or subtraction of unit fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators

arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith662 Writing a mixed number and an improper fraction for a shaded region
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith605 Plotting rational numbers on a number line
 arith215 Addition or subtraction of mixed numbers with the same denominator
 arith084 Addition of mixed numbers with the same denominator and carry
 arith216 Subtraction of mixed numbers with the same denominator and borrowing
 arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith817 Division with a mixed number and a whole number
 arith068 Mixed number division
 arith820 Word problem involving multiplication or division with mixed numbers
 arith821 Exponents and fractions
 alge790 Evaluating expressions with exponents of zero
 arith704 Exponents and signed fractions
 arith859 Order of operations with fractions: Problem type 1
 arith860 Order of operations with fractions: Problem type 2
 arith861 Order of operations with fractions: Problem type 3
 arith695 Complex fraction without variables: Problem type 1
 alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
 alge801 Additive property of equality with fractions and mixed numbers
 alge836 Additive property of equality with signed fractions
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge012 Multiplicative property of equality with signed fractions

Decimals

arith127 Writing a decimal and a fraction for a shaded region
 arith110 Decimal place value: Tenths and hundredths
 arith220 Decimal place value: Hundreds to ten thousandths
 arith714 Writing a decimal number less than 1 given its name
 arith715 Writing a decimal number greater than 1 given its name
 arith716 Writing a decimal number given its name: Advanced
 arith829 Reading decimal position on a number line: Tenths
 arith830 Reading decimal position on a number line: Hundredths
 arith831 Understanding decimal position on a number line using zoom: Hundredths
 arith832 Understanding decimal position on a number line using zoom: Thousandths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith221 Rounding decimals
 arith717 Converting a decimal to a proper fraction without simplifying: Basic
 arith719 Converting a decimal to a proper fraction without simplifying: Advanced
 arith718 Converting a decimal to a proper fraction in simplest form: Basic
 arith087 Converting a decimal to a proper fraction in simplest form: Advanced
 arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
 arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
 arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
 arith624 Addition of aligned decimals

arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
geom525 Computing distances between decimals on the number line
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith046 Decimal multiplication: Problem type 2
arith082 Multiplication of a decimal by a power of ten
arith738 Multiplication of a decimal by a power of 0.1
arith740 Multiplication of decimals that have a product less than 0.1
arith752 Estimating a product of decimals
arith750 Signed decimal multiplication
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith744 Whole number division with decimal answers
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith742 Division of a decimal by a power of 0.1
arith745 Decimal division with rounding
arith751 Signed decimal division
arith136 Word problem with division of a decimal and a whole number
arith138 Word problem with division of two decimals
arith629 Word problem with multiple decimal operations: Problem type 2
arith103 Average of two numbers
arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
arith727 Converting a fraction to a terminating decimal: Basic
arith728 Converting a fraction to a terminating decimal: Advanced
arith730 Converting a fraction to a repeating decimal: Basic
arith731 Converting a fraction to a repeating decimal: Advanced
arith733 Using a calculator to convert a fraction to a rounded decimal
arith111 Converting a mixed number to a terminating decimal: Basic
arith112 Converting a mixed number to a terminating decimal: Advanced
arith732 Converting a fraction or mixed number to a rounded decimal
arith609 Ordering fractions and decimals
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith748 Addition or subtraction with a decimal and a mixed number
arith749 Multiplication with a decimal and a fraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge800 Additive property of equality with decimals
alge825 Multiplicative property of equality with decimals

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions
 arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2

alge218 Solving a word problem involving rates and time conversion
unit034 Converting between metric and U.S. Customary unit systems
unit035 Converting between compound units: Basic
unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
arith837 Converting a percentage to a fraction with a denominator of 100
arith674 Finding the percentage of a grid that is shaded
arith903 Representing benchmark percentages on a grid
arith723 Introduction to converting a percentage to a decimal
arith833 Introduction to converting a decimal to a percentage
arith834 Converting between percentages and decimals
arith841 Converting a mixed number percentage to a decimal
arith835 Converting between percentages and decimals in a real-world situation
arith090 Converting a percentage to a fraction in simplest form
arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith904 Finding benchmark fractions and percentages for a figure
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage
arith842 Converting a fraction to a percentage in a real-world situation
arith840 Finding a percentage of a whole number
arith030 Finding a percentage of a whole number without a calculator: Basic
arith844 Finding a percentage of a whole number without a calculator: Advanced
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith845 Finding a percentage of a total amount: Real-world situations
arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
arith857 Estimating a tip without a calculator
arith069 Writing a ratio as a percentage without a calculator
arith850 Finding the rate of a tax or commission
arith849 Finding the total amount given the percentage of a partial amount
stat805 Making a reasonable inference based on proportion statistics
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith232 Finding simple interest without a calculator
arith853 Introduction to compound interest
arith915 Calculating income tax
arith918 Comparing discounts
arith909 Examining a savings plan for college
arith914 Calculations involving paying for college
arith920 Comparing total costs for attending different colleges
arith922 Distinguishing between fixed and variable expenses
arith916 Computing percentages for categories of a budget
arith919 Computations involving cost of living and hourly wage
arith921 Comparing annual salaries of different occupations
arith911 Calculations involving purchases with debit and credit cards

arith950 Comparing costs of checking accounts
 arith951 Balancing a check register
 arith912 Reading a credit report
 arith913 Understanding the impact of a credit score
 arith917 Computing a person's net worth
 arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
 arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
 arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
 arith910 Calculating and comparing simple interest and compound interest

Equations and Inequalities

alge647 Identifying like terms
 alge700 Combining like terms: Whole number coefficients
 alge607 Combining like terms: Integer coefficients
 arith655 Introduction to properties of addition
 alge187 Properties of addition
 alge666 Combining like terms: Fractional coefficients
 alge665 Combining like terms: Decimal coefficients
 alge310 Multiplying a constant and a linear monomial
 alge606 Distributive property: Whole number coefficients
 alge604 Distributive property: Integer coefficients
 alge610 Distributive property: Fractional coefficients
 alge605 Factoring a linear binomial
 alge612 Identifying parts in an algebraic expression
 alge613 Identifying equivalent algebraic expressions
 arith656 Introduction to properties of multiplication
 alge188 Properties of real numbers
 alge608 Using distribution and combining like terms to simplify: Univariate
 alge667 Identifying properties used to simplify an algebraic expression
 alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
 alge293 Combining like terms in a quadratic expression
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge840 Solving a proportion of the form $(x+a) \div b = c \div d$

alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge603 Introduction to solving an absolute value equation
alge864 Solving an absolute value equation: Problem type 1
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge016 Translating a sentence into a one-step equation
alge671 Choosing stories that can be represented by given one-step equations
alge841 Translating a sentence into a multi-step equation
alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
alge618 Comparing arithmetic and algebraic solutions to a word problem
alge672 Choosing stories that can be represented by given two-step equations
alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
alge014 Solving a word problem with two unknowns using a linear equation
geom217 Finding the side length of a rectangle given its perimeter or area
alge673 Writing an equation to represent a real-world problem: Variable on both sides
alge674 Writing and solving a real-world problem given an equation with the variable on both sides
alge219 Solving a decimal word problem using a linear equation with the variable on both sides
alge704 Solving a fraction word problem using a linear equation with the variable on both sides
alge792 Solving a word problem with three unknowns using a linear equation
alge842 Solving a word problem involving consecutive integers
alge794 Solving a value mixture problem using a linear equation
alge795 Solving a percent mixture problem using a linear equation
alge796 Solving a distance, rate, time problem using a linear equation
alge015 Translating a sentence by using an inequality symbol
alge845 Translating a sentence into a one-step inequality
alge653 Introduction to identifying solutions to an inequality
alge748 Writing an inequality for a real-world situation
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge847 Writing a compound inequality given a graph on the number line
alge652 Identifying solutions to a one-step linear inequality
alge848 Additive property of inequality with whole numbers
alge849 Additive property of inequality with integers
alge852 Additive property of inequality with signed fractions
alge853 Additive property of inequality with signed decimals
alge809 Multiplicative property of inequality with whole numbers
alge854 Multiplicative property of inequality with integers
alge964 Multiplicative property of inequality with signed fractions
alge621 Solving a word problem using a one-step linear inequality
alge844 Identifying solutions to a two-step linear inequality in one variable
alge636 Solving a two-step linear inequality with whole numbers
alge855 Solving a two-step linear inequality: Problem type 1
alge856 Solving a two-step linear inequality: Problem type 2
alge857 Solving a two-step linear inequality with a fractional coefficient
alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
alge846 Translating a sentence into a multi-step inequality
alge619 Solving a word problem using a two-step linear inequality and describing the solution
alge623 Solving a word problem using a two-step linear inequality
alge749 Solving a decimal word problem using a two-step linear inequality

Graphing, Functions, and Sequences

alge278 Reading a point in quadrant 1
alge279 Plotting a point in quadrant 1
alge064 Reading a point in the coordinate plane
alge067 Plotting a point in the coordinate plane
alge692 Plotting a point in quadrant 1: Mixed number coordinates
alge693 Plotting a point in the coordinate plane: Mixed number coordinates
arith404 Naming the quadrant or axis of a point given its graph
arith405 Naming the quadrant or axis of a point given its coordinates
arith406 Naming the quadrant or axis of a point given the signs of its coordinates
alge695 Finding distances between points that share a common coordinate given the graph
alge696 Finding distances between points that share a common coordinate given their coordinates
alge191 Midpoint of a line segment in the plane
alge282 Function tables with two-step rules
alge850 Table for a linear equation
fun005 Writing a function rule given a table of ordered pairs: One-step rules
fun006 Writing a function rule given a table of ordered pairs: Two-step rules
alge873 Identifying solutions to a linear equation in two variables
alge066 Finding a solution to a linear equation in two variables
alge280 Graphing a line in quadrant 1
alge877 Graphing a linear equation of the form $y = mx$
alge878 Graphing a line given its equation in slope-intercept form: Integer slope
alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
alge880 Graphing a line given its equation in standard form
alge198 Graphing a vertical or horizontal line
alge884 Finding x - and y -intercepts given the graph of a line on a grid
alge924 Finding x - and y -intercepts of a line given the equation: Basic
alge210 Finding x - and y -intercepts of a line given the equation: Advanced
alge197 Graphing a line given its x - and y -intercepts
alge881 Graphing a line by first finding its x - and y -intercepts
alge874 Identifying linear functions given ordered pairs
geom358 Identifying parallel and perpendicular lines
mstat007 Interpreting a line graph
arith454 Making a table and plotting points given a unit rate
arith501 Identifying proportional relationships in graphs: Basic
arith502 Identifying proportional relationships in graphs: Advanced
arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
alge699 Comparing proportional relationships given in different forms
alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge814 Using right triangles to find the slope of a line
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y -intercept
alge196 Graphing a line through a given point with a given slope
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
alge828 Interpreting direct variation from a graph
alge905 Writing an inverse variation equation
alge903 Identifying direct and inverse variation equations
alge902 Identifying direct and inverse variation from ordered pairs and writing equations
alge176 Word problem on inverse variation
alge220 Word problem on inverse proportions
alge625 Identifying linear equations: Basic

alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y-intercept
 alge258 Writing an equation of a line given its slope and y-intercept
 alge892 Writing an equation and graphing a line given its slope and y-intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2 + bx + c$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3 + bx^2 + cx + d$
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes

alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base

alge961 Introduction to the product rule with negative exponents
alge689 Introduction to the quotient rule with negative exponents: Whole number base
alge755 Quotient rule with negative exponents: Problem type 1
alge691 Introduction to the power of a power rule with negative exponents: Whole number base
alge025 Power of a power rule with negative exponents
scinot023 Introduction to scientific notation with positive exponents
arith036 Scientific notation with positive exponent
scinot024 Introduction to scientific notation with negative exponents
arith037 Scientific notation with negative exponent
scinot012 Converting between scientific notation and standard form in a real-world situation
scinot025 Estimating numbers using scientific notation
scinot020 Choosing metric units and converting to the base unit in scientific notation
scinot021 Expressing calculator notation as scientific notation
scinot008 Multiplying numbers written in scientific notation: Basic
scinot009 Multiplying numbers written in scientific notation: Advanced
scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
scinot010 Dividing numbers written in scientific notation: Basic
scinot011 Dividing numbers written in scientific notation: Advanced
scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
scinot017 Estimating the sum or difference of two numbers written in scientific notation
alge758 Degree and leading coefficient of a univariate polynomial
alge031 Degree of a multivariate polynomial
alge798 Simplifying a sum or difference of two univariate polynomials
alge029 Simplifying a sum or difference of three univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge765 Multiplying binomials in two variables
alge764 Multiplying conjugate binomials: Univariate
alge032 Squaring a binomial: Univariate
alge935 Multiplication involving binomials and trinomials in one variable
alge180 Multiplication involving binomials and trinomials in two variables
alge737 Introduction to the LCM of two monomials
alge055 Least common multiple of two monomials
alge736 Introduction to the GCF of two monomials
alge037 Greatest common factor of two multivariate monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge944 Factoring a perfect square trinomial with leading coefficient 1
alge290 Factoring a difference of squares in one variable: Basic
alge947 Factoring a difference of squares in one variable: Advanced
alge045 Finding the roots of a quadratic equation with leading coefficient 1
arith016 Square root of a perfect square
arith601 Square root of a rational perfect square
alge413 Finding all square roots of a number
arith760 Square roots of perfect squares with signs
arith763 Using a calculator to approximate a square root
arith602 Estimating a square root
alge567 Using numerical methods to approximate a square root to the nearest tenth
alge568 Using numerical methods to approximate a square root to the nearest hundredth
arith515 Approximating the location of irrational numbers on a number line
arith712 Ordering real numbers
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith514 Converting a repeating decimal to a fraction
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial

arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1

geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length

geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom620 Area of a rectangle involving fractions
 geom619 Area of a rectangle involving mixed numbers and fractions
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom351 Areas of rectangles with the same perimeter
 geom869 Estimates and exact answers
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 geom142 Word problem involving the area between two rectangles
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
 geom344 Area involving rectangles and triangles
 alge724 Finding an area in terms of variables
 geom022 Area of a parallelogram
 geom023 Area of a trapezoid
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom832 Area of quadrilaterals in the coordinate plane
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom588 Informal proof of the Pythagorean Theorem
 geom347 Introduction to a circle: Diameter, radius, and chord
 geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
 geom016 Circumference of a circle
 geom218 Finding the radius or the diameter of a circle given its circumference
 geom838 Circumference ratios
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom126 Area of a sector of a circle: Exact answer in terms of pi
 geom868 Classifying solids
 geom348 Vertices, edges, and faces of a solid
 geom830 Counting the cubes in a solid made of cubes
 geom816 Side views of a solid made of cubes
 geom550 Identifying horizontal and vertical cross sections of solids
 geom354 Volume of a rectangular prism made of unit cubes
 geom518 Volume of a solid made of cubes with unit fraction edge lengths
 geom535 Volume of a rectangular prism with fractional edge lengths

alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom035 Volume of a cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom133 Ratio of volumes
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit

mstat067 Approximating the equation of a line of best fit and making predictions
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics
 mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat090 Comparing sample means
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat084 Assessing the degree of overlap of two distributions
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

B.96 CC Geometry Tutorial Lab (Intervention)

Algebra Review

arith233 Introduction to exponents
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith067 Simplifying a fraction
arith212 Equivalent fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith711 Division involving zero
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith801 Finding the LCD of two fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith813 Multiplication of 3 fractions
arith821 Exponents and fractions
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith695 Complex fraction without variables: Problem type 1
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith068 Mixed number division
arith110 Decimal place value: Tenths and hundredths
arith221 Rounding decimals
arith129 Introduction to ordering decimals
arith733 Using a calculator to convert a fraction to a rounded decimal
arith624 Addition of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith082 Multiplication of a decimal by a power of ten
arith081 Division of a decimal by a whole number
arith083 Division of a decimal by a power of ten
alge286 Plotting integers on a number line
arith605 Plotting rational numbers on a number line
arith691 Ordering integers
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith118 Order of operations with integers
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith822 Signed fraction multiplication: Basic
arith117 Signed decimal addition and subtraction
arith702 Exponents and integers: Problem type 1

arith704 Exponents and signed fractions
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith440 Operations with absolute value: Problem type 1
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
alge608 Using distribution and combining like terms to simplify: Univariate
alge293 Combining like terms in a quadratic expression
alge432 Introduction to adding fractions with variables and common denominators
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers
alge836 Additive property of equality with signed fractions
alge008 Multiplicative property of equality with whole numbers
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions
alge825 Multiplicative property of equality with decimals
alge797 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge803 Using two steps to solve an equation with whole numbers
alge266 Additive property of equality with a negative coefficient
alge006 Solving a two-step equation with integers
alge815 Introduction to using substitution to solve a linear equation
alge200 Solving an equation to find the value of an expression
alge920 Introduction to solving an equation with parentheses
alge837 Solving a multi-step equation given in fractional form
alge986 Identifying properties used to solve a linear equation
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge208 Solving a two-step equation with signed fractions
alge603 Introduction to solving an absolute value equation
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge831 Translating a phrase into a one-step expression
alge016 Translating a sentence into a one-step equation
arith504 Writing an equation to represent a proportional relationship
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic

alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
arith834 Converting between percentages and decimals
arith843 Using a calculator to convert a fraction to a rounded percentage
arith030 Finding a percentage of a whole number without a calculator: Basic
arith840 Finding a percentage of a whole number
arith862 Applying the percent equation: Problem type 1
arith686 Writing a ratio as a percentage
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith858 Finding the percentage increase or decrease: Basic
alge015 Translating a sentence by using an inequality symbol
alge653 Introduction to identifying solutions to an inequality
alge017 Graphing a linear inequality on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge652 Identifying solutions to a one-step linear inequality
alge848 Additive property of inequality with whole numbers
alge849 Additive property of inequality with integers
alge809 Multiplicative property of inequality with whole numbers
alge854 Multiplicative property of inequality with integers
alge964 Multiplicative property of inequality with signed fractions
alge844 Identifying solutions to a two-step linear inequality in one variable
alge636 Solving a two-step linear inequality with whole numbers
alge855 Solving a two-step linear inequality: Problem type 1
alge856 Solving a two-step linear inequality: Problem type 2
alge857 Solving a two-step linear inequality with a fractional coefficient
alge024 Introduction to the product rule of exponents
alge311 Product rule with positive exponents: Univariate
alge306 Introduction to the power of a power rule of exponents
alge305 Introduction to the power of a product rule of exponents
alge451 Simplifying a ratio of multivariate monomials: Basic
alge827 Introduction to the quotient rule of exponents
alge452 Simplifying a ratio of univariate monomials
alge026 Quotient of expressions involving exponents
alge798 Simplifying a sum or difference of two univariate polynomials
alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
alge033 Multiplying binomials with leading coefficients of 1
alge983 Multiplying binomials with leading coefficients greater than 1
alge764 Multiplying conjugate binomials: Univariate
alge765 Multiplying binomials in two variables
alge032 Squaring a binomial: Univariate
alge068 Squaring a binomial: Multivariate
arith056 Factors
arith033 Greatest common factor of 2 numbers
alge605 Factoring a linear binomial
alge736 Introduction to the GCF of two monomials
alge738 Factoring out a monomial from a polynomial: Univariate
alge039 Factoring a quadratic with leading coefficient 1
alge936 Factoring out a constant before factoring a quadratic
alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
alge944 Factoring a perfect square trinomial with leading coefficient 1
arith016 Square root of a perfect square
arith763 Using a calculator to approximate a square root
arith601 Square root of a rational perfect square
arith760 Square roots of perfect squares with signs
arith761 Square roots of integers raised to even exponents
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial

alge537 Using absolute value to simplify square roots of perfect square monomials
arith094 Cube root of an integer
arith093 Simplifying the square root of a whole number less than 100
arith762 Simplifying the square root of a whole number greater than 100
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
arith767 Introduction to square root addition or subtraction
arith766 Simplifying a quotient of square roots
alge527 Rationalizing a denominator: Quotient involving square roots
alge528 Rationalizing a denominator: Square root of a fraction
alge400 Introduction to solving a radical equation
alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
alge698 Solving an equation of the form $x^3 = a$ using integers
alge681 Solving an equation written in factored form
alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
alge045 Finding the roots of a quadratic equation with leading coefficient 1
alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
alge211 Solving a quadratic equation needing simplification
alge962 Solving an equation of the form $x^2 = a$ using the square root property
alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
alge092 Solving a quadratic equation using the square root property: Exact answers, basic
alge095 Applying the quadratic formula: Exact answers
alge963 Applying the quadratic formula: Decimal answers
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom618 Perimeter of a polygon involving mixed numbers and fractions
geom221 Finding the missing length in a figure
geom353 Perimeter of a piecewise rectangular figure
alge615 Writing algebraic expressions for the perimeter of a figure
geom817 Finding a side length given the perimeter and side lengths with variables
geom078 Sides of polygons having the same perimeter
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom869 Estimates and exact answers
alge616 Writing algebraic expressions for the area of a figure
geom564 Finding side lengths of squares given an area and a perimeter
geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
geom143 Finding the perimeter or area of a rectangle given one of these values
geom410 Word problem involving the area of a square or a rectangle
geom142 Word problem involving the area between two rectangles
geom444 Word problem on optimizing an area or perimeter
mstat033 Measuring length to the nearest inch
mstat034 Measuring length to the nearest quarter or half inch
unit005 U.S. Customary unit conversion with whole number values
mstat035 Conversions involving measurements in feet and inches
mstat036 Adding measurements in feet and inches
unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
mstat063 Measuring length to the nearest centimeter
mstat064 Measuring length to the nearest millimeter
unit001 Metric distance conversion with whole number values
unit002 Metric mass or capacity conversion with whole number values
unit003 Metric distance conversion with decimal values

unit004 Metric conversion with decimal values: Two-step problem
 unit034 Converting between metric and U.S. Customary unit systems
 unit009 U.S. Customary area unit conversion with whole number values
 unit010 Metric area unit conversion with decimal values

Segments and Angles

geom349 Naming segments, rays, and lines
 geom459 Analyzing relationships between points, lines, and planes given a figure
 geom359 Identifying congruent shapes on a grid
 geom358 Identifying parallel and perpendicular lines
 geom407 Matching basic geometric terms with their definitions
 geom392 Introduction to segment addition
 alge694 Computing the distance between two integers on a number line
 geom394 Computing distances between decimals on a number line
 geom393 Finding a point on a number line given the length of a segment and another point
 geom395 Midpoint of a number line segment: Integers
 geom396 Midpoint of a number line segment: Decimals
 geom397 Using a segment's midpoint and endpoint to locate the other endpoint
 geom521 Segment addition and midpoints
 geom399 Finding a point that partitions a number line segment in a given fractional relationship
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge850 Table for a linear equation
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 geom458 Identifying congruent segments in the plane
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 geom406 Finding a point that partitions a segment in the plane in a given fractional relationship
 geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom460 Naming angles, sides of angles, and vertices
 geom039 Finding supplementary and complementary angles
 geom454 Introduction to angle addition
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom850 Angle addition with relationships between angles
 geom851 Angle addition and angle bisectors
 geom800 Identifying linear pairs and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom500 Solving equations involving vertical angles and linear pairs
 geom389 Constructing congruent line segments
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom154 Constructing the perpendicular bisector of a line segment
 geom457 Making conjectures given a geometric construction

Reasoning

alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge732 Finding patterns in shapes
 mstat042 Interpreting a Venn diagram of 2 sets
 glogic001 Conditional statements and negations
 glogic005 The converse, inverse, and contrapositive of a conditional statement
 glogic011 Writing the converse, inverse, and contrapositive of a conditional statement and determining their truth values
 glogic012 Writing a biconditional statement as a conditional statement and its converse and determining truth values
 glogic013 Finding counterexamples to conjectures
 glogic008 Conditional statements and deductive reasoning
 geom665 Distinguishing between undefined terms, definitions, postulates, conjectures, and theorems
 geom616 Introduction to proofs: Justifying statements
 geom614 Proofs involving segment congruence
 geom611 Proofs involving angle congruence

Lines

geom304 Identifying corresponding and alternate angles
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom503 Solving equations involving angles and two pairs of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom835 Introduction to proofs involving parallel lines
 geom836 Proofs involving parallel lines
 fun001 Table for a linear function
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge814 Using right triangles to find the slope of a line
 alge259 Graphing a line given its slope and y -intercept
 alge196 Graphing a line through a given point with a given slope
 alge891 Rewriting a linear equation in the form $Ax + By = C$
 alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
 alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
 alge882 Graphing a line by first finding its slope and y -intercept
 alge258 Writing an equation of a line given its slope and y -intercept
 alge892 Writing an equation and graphing a line given its slope and y -intercept
 alge893 Writing an equation in slope-intercept form given the slope and a point
 alge318 Finding the slope and a point on a line given its equation in point-slope form
 alge883 Graphing a line given its equation in point-slope form
 alge894 Writing an equation in point-slope form given the slope and a point

alge313 Writing an equation in standard form given the slope and a point
 alge070 Writing an equation of a line given the y-intercept and another point
 alge072 Writing the equation of the line through two given points
 alge073 Writing the equations of vertical and horizontal lines through a given point
 geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
 geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
 alge895 Identifying parallel and perpendicular lines from equations
 geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 geom462 Identifying parallel and perpendicular lines from coordinates
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition

Triangles

geom306 Acute, obtuse, and right triangles
 geom626 Classifying scalene, isosceles, and equilateral triangles by side lengths
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom322 Identifying coordinates that give right triangles
 geom323 Identifying scalene, isosceles, and equilateral triangles given coordinates of their vertices
 geom001 Finding an angle measure of a triangle given two angles
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom628 Finding angle measures of a triangle given angles with variables
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom357 Identifying transformations
 geom519 Identifying and naming congruent parts of congruent triangles
 geom325 Determining if figures are related by rigid motions
 geom327 Examining triangle congruence in terms of rigid motion
 geom329 Exploring the triangle congruence theorems
 geom418 Completing proofs involving congruent triangles using SSS or SAS
 geom420 Introduction to proving triangles congruent using SSS or SAS
 geom520 Identifying and naming congruent triangles
 geom419 Completing proofs involving congruent triangles using ASA or AAS
 geom421 Introduction to proving triangles congruent using ASA or AAS
 geom837 Proofs involving congruent triangles and segment or angle bisectors
 geom647 Separating overlapping triangles and identifying common features
 geom840 Proofs involving congruent triangles that overlap: Basic
 geom423 Proofs involving congruent triangles with parallel or perpendicular segments
 geom424 Determining when to apply the HL congruence property
 geom425 Introduction to proving triangles congruent using the HL property
 geom422 Introduction to proofs involving congruent triangles and CPCTC
 geom839 Proofs involving congruent triangles, parallel or perpendicular segments, and CPCTC
 geom843 Proofs involving congruent triangles that overlap: Advanced
 geom645 Finding side lengths and angle measures of isosceles and equilateral triangles
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom629 Finding angle measures of an isosceles triangle given angles with variables
 geom363 Proofs of theorems involving isosceles triangles
 geom449 Classifying segments inside triangles
 geom446 Using the circumcenter of a triangle to find segment lengths
 geom447 Using the incenter of a triangle to find segment lengths and angle measures
 geom448 Using the centroid of a triangle to find segment lengths
 geom413 Introduction to the triangle midsegment theorem
 geom324 Proving the triangle midsegment theorem in the coordinate plane
 geom441 Proof involving points on the perpendicular bisector of a line segment

geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom664 Using triangle inequality to determine possible lengths of a third side
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom543 Drawing a circle with a given radius or diameter
 geom545 Drawing triangles with given side lengths using a compass
 geom854 Relationship between angle measures and side lengths in a triangle
 geom855 Relationship between angle measures and side lengths in two triangles
 geom451 Using the hinge theorem
 geom650 Indirect proof (proof by contradiction)

Polygons and Quadrilaterals

geom361 Naming polygons
 geom870 Sum of the angle measures of a quadrilateral
 geom656 Finding the sum of the interior angle measures of a convex polygon given the number of sides
 geom655 Finding the number of sides of a convex polygon given the sum of the measures of the interior angles
 geom657 Finding a missing interior angle measure in a convex polygon
 geom658 Finding the measures of an interior angle and an exterior angle of a regular polygon
 geom659 Finding the number of sides of a regular polygon given the measure of an interior angle
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom528 Finding measures involving diagonals of parallelograms
 geom527 Conditions for parallelograms
 geom833 Finding measures involving diagonals of rectangles
 geom436 Finding angle measures involving diagonals of a rhombus
 geom523 Conditions for quadrilaterals
 geom661 Completing proofs of theorems involving sides of a parallelogram
 geom662 Completing proofs of theorems involving angles of a parallelogram
 geom536 Drawing and identifying a polygon in the coordinate plane
 geom818 Finding the coordinates of a point to make a parallelogram
 geom819 Finding coordinates of vertices of polygons
 geom321 Proving that a quadrilateral with given vertices is a parallelogram
 geom408 Classifying parallelograms in the coordinate plane
 geom863 Congruence in the coordinate plane

Similarity

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 arith064 Solving a word problem on proportions using a unit rate
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 alge888 Finding the coordinate that yields a given slope
 geom390 Finding a point that partitions a number line segment in a given ratio
 geom391 Finding a point that partitions a segment in the plane in a given ratio
 geom360 Identifying similar or congruent shapes on a grid

geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom510 Triangles and parallel lines
 geom475 Triangles and angle bisectors
 geom326 Determining if figures are related by similarity transformations
 geom328 Examining triangle similarity in terms of similarity transformations
 geom364 Identifying and naming similar triangles
 geom365 Proofs involving similar triangles
 geom472 Completing proofs involving the triangle proportionality theorem
 geom461 Proving the slope criterion for parallel or perpendicular lines
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale

Right Triangles and Trigonometry

alge408 Word problem involving the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
 geom862 Using the Pythagorean Theorem repeatedly
 geom603 Identifying side lengths that give right triangles
 geom589 Demonstrating the converse of the Pythagorean Theorem
 geom452 Identifying similar right triangles that overlap
 geom507 Right triangles and geometric mean
 geom473 Proving the Pythagorean Theorem using similar triangles
 geom860 Special right triangles: Decimal answers
 geom506 Special right triangles: Exact answers
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom316 Relationship between the sines and cosines of complementary angles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc642 Solving a right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc031 Solving a triangle with the law of sines: Problem type 1
 pcalc032 Solving a triangle with the law of sines: Problem type 2
 pcalc644 Solving a word problem using the law of sines
 geom320 Proving the law of sines
 pcalc033 Solving a triangle with the law of cosines
 pcalc645 Solving a word problem using the law of cosines
 geom409 Proving the law of cosines
 pcalc063 Translation of a vector
 pcalc739 Multiplication of a vector by a scalar: Geometric approach
 pcalc060 Magnitude of a vector given in component form
 geom856 Vector addition and scalar multiplication: Component form
 vector008 Linear combination of vectors: Component form
 geom857 Vector addition: Geometric approach
 vector007 Vector subtraction: Geometric approach
 vector002 Finding the magnitude and direction of a vector given its graph
 vector005 Finding the components of a vector given its graph

Transformations

geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 geom375 Understanding the definition of a translation
 pcalc038 Addition or subtraction of matrices
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom376 Understanding the definition of a reflection
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom377 Understanding the definition of a rotation
 geom334 Drawing lines of symmetry
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom831 Rotational and point symmetries
 geom369 Writing a rule to describe a translation
 geom370 Writing a rule to describe a reflection
 geom371 Writing a rule to describe a rotation
 geom373 Identifying transformations that map a quadrilateral onto itself
 geom374 Identifying transformations that map a regular polygon onto itself
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom372 Writing a rule to describe a dilation
 geom582 Determining if figures are similar and related by a sequence of transformations
 geom463 Exploring similarity of circles
 geom379 Exploring the effect of dilation on lines
 pcalc037 Scalar multiplication of a matrix

Area and Volume

geom022 Area of a parallelogram
 geom501 Finding the area of a right triangle on a grid
 geom509 Finding the area of a right triangle or its corresponding rectangle
 geom801 Area of a triangle
 geom537 Finding the perimeter or area of a rectangle in the coordinate plane
 geom430 Word problem on population density
 geom426 Finding the perimeter of a triangle, trapezoid, or parallelogram in the coordinate plane
 geom437 Finding the area of a triangle or parallelogram in the coordinate plane

geom440 Finding the area of a right triangle using the Pythagorean Theorem
geom068 Computing an area using the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom344 Area involving rectangles and triangles
alge724 Finding an area in terms of variables
geom439 Using trigonometry to find the area of a right triangle
pcalc646 Finding the area of a triangle using trigonometry
geom319 Expressing the area of a triangle in terms of the sine of one of its angles
pcalc647 Heron's formula
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom023 Area of a trapezoid
geom434 Area of a rhombus
geom435 Finding the area of a rhombus using the Pythagorean Theorem
geom438 Finding the area of a trapezoid, rhombus, or kite in the coordinate plane
geom213 Area of a regular polygon
geom479 Finding the area of a regular polygon using special right triangles
geom481 Side lengths, perimeters, and areas of similar polygons
geom347 Introduction to a circle: Diameter, radius, and chord
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom427 Informal argument for the formula of the circumference of a circle
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom477 Circumference and area of a circle: Exact answers in terms of pi
geom570 Distinguishing between the area and circumference of a circle
geom428 Informal argument for the formula of the area of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom649 Area involving multiple inscribed figures
geom212 Circles inscribed in and circumscribed about regular polygons
geom126 Area of a sector of a circle: Exact answer in terms of pi
geom429 Informal argument for the formula of the area of a sector
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom219 Nets of solids
geom861 Nets of solids: Advanced
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom381 Identifying solids generated by rotations of two-dimensional regions
geom443 Identifying geometric shapes that model real-world objects
geom491 Identifying properties of Euclidean and spherical geometries
geom031 Surface area of a cube or a rectangular prism
geom632 Surface area of a rectangular prism made of unit cubes
geom556 Using a net to find the surface area of a rectangular prism
geom576 Word problem involving the surface area of a rectangular prism
geom345 Surface area of a piecewise rectangular prism made of unit cubes
geom091 Surface area of a triangular prism
geom557 Using a net to find the surface area of a triangular prism
geom621 Surface area of a cylinder
geom034 Surface area of a cylinder: Exact answers in terms of pi
geom578 Word problem involving the surface area of a cylinder
geom484 Word problem involving the surface area of rectangular prisms and cylinders
geom483 Word problem involving the surface area of rectangular prisms and pyramids
geom354 Volume of a rectangular prism made of unit cubes
geom311 Volume of a rectangular prism
geom555 Distinguishing between surface area and volume
geom518 Volume of a solid made of cubes with unit fraction edge lengths

geom535 Volume of a rectangular prism with fractional edge lengths
 geom865 Measuring the net of a solid to find surface area or volume
 geom382 Volume of an oblique rectangular prism
 alge617 Writing equivalent expressions for the volume of a rectangular prism
 geom565 Finding the side length of a cube given its volume
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom386 Computations involving density, mass, and volume
 geom387 Word problem on density involving the volume of a rectangular solid
 geom505 Volume of a piecewise rectangular prism
 geom090 Volume of a triangular prism
 geom572 Word problem involving the volume of a triangular prism
 geom035 Volume of a cylinder
 geom385 Informal argument for the formula of the volume of a cylinder
 geom383 Volume of an oblique cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom388 Word problem on density involving the volume of a cylindrical solid
 geom384 Using cross sections to identify solids with the same volume
 geom133 Ratio of volumes
 geom033 Volume of a pyramid
 geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
 geom638 Relating the volumes of a triangular prism and a triangular pyramid
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of π
 geom654 Informal argument for the formula of the volume of a cone
 geom639 Relating the volumes of a cylinder and a cone
 geom575 Word problem involving the volume of a cone
 geom842 Surface area of a sphere
 geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom488 Identifying similar solids
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom489 Computing side length, surface area, and volume for similar solids
 geom490 Word problem involving volumes of similar solids

Circles

geom464 Identifying chords, secants, and tangents of a circle
 geom848 Tangents of a circle: Problem type 1
 geom849 Tangents of a circle: Problem type 2
 geom470 Constructing a tangent of a circle
 geom465 Naming and finding measures of central angles, inscribed angles, and arcs of a circle
 geom467 Applying properties of radii, diameters, and chords
 geom814 Angle measure in a circle graph
 geom466 Arc length
 geom805 Arc length and area of a sector of a circle
 geom653 Computing ratios of arc lengths to radii and describing the result
 pcalc002 Converting between degree and radian measure: Problem type 1
 geom468 Central angles and inscribed angles of a circle
 geom469 Central angles and angles involving chords and tangents of a circle
 geom666 Inscribed angles in relation to a diameter or a polygon inscribed in a circle
 geom667 Inscribed angles and angles involving chords and tangents of a circle
 geom492 Establishing facts about a quadrilateral inscribed in a circle
 geom312 Inscribing an equilateral triangle or a regular hexagon in a circle
 geom313 Inscribing a square in a circle
 geom314 Inscribing a circle in a triangle
 geom315 Circumscribing a circle about a triangle
 geom567 Angles of intersecting secants and tangents
 geom568 Lengths of chords, secants, and tangents

geom496 Identifying the center and radius to graph a circle given its equation in standard form
 alge094 Completing the square
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 geom494 Deriving the equation of a parabola given its focus and directrix

Probability

mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 pcalc809 Introduction to permutations and combinations
 pcalc810 Permutations and combinations: Problem type 1
 pcalc089 Permutations and combinations: Problem type 2
 stat790 Permutations, combinations, and the multiplication principle for counting
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat046 Experimental and theoretical probability
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat116 Probabilities of a permutation and a combination
 mstat048 Odds of an event
 mstat011 Area as probability
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat047 Introduction to expectation
 mstat114 Using a random number table to make a fair decision
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 stat020 Calculating relative frequencies in a contingency table
 mstat019 Identifying independent events given descriptions of experiments
 stat850 Probability of independent events
 stat851 Probability of dependent events
 stat117 Probabilities of draws with replacement
 stat118 Probabilities of draws without replacement
 mstat115 Determining outcomes for compound events and complements of events
 mstat110 Using a Venn diagram to understand the multiplication rule for probability
 mstat107 Outcomes and event probability: Conditional probability
 mstat104 Identifying independent events given values of probabilities
 mstat105 Computing conditional probability using a two-way frequency table
 mstat106 Computing conditional probability to make an inference using a two-way frequency table
 mstat118 Conditional probability: Basic
 mstat109 Using a Venn diagram to understand the addition rule for probability

mstat108 Outcomes and event probability: Addition rule
 mstat032 Probability of the union of two events
 mstat117 Probability of intersection or union: Word problems

B.97 CC Algebra 2 Tutorial Lab (Intervention)

Arithmetic Readiness

arith067 Simplifying a fraction
 arith212 Equivalent fractions
 arith711 Division involving zero
 arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1
 arith053 Fraction multiplication
 arith812 Product of a fraction and a whole number: Problem type 2
 arith813 Multiplication of 3 fractions
 arith088 The reciprocal of a number
 arith694 Division involving a whole number and a fraction
 arith022 Fraction division
 arith695 Complex fraction without variables: Problem type 1
 arith015 Writing an improper fraction as a mixed number
 arith619 Writing a mixed number as an improper fraction
 arith808 Addition of mixed numbers with different denominators and carry
 arith809 Subtraction of mixed numbers with different denominators and borrowing
 arith807 Addition and subtraction of 3 mixed numbers with different denominators
 arith815 Mixed number multiplication
 arith816 Multiplication of a mixed number and a whole number
 arith068 Mixed number division
 arith110 Decimal place value: Tenths and hundredths
 arith221 Rounding decimals
 arith687 Fractional position on a number line
 arith092 Using a common denominator to order fractions
 arith830 Reading decimal position on a number line: Hundredths
 arith129 Introduction to ordering decimals
 arith608 Ordering decimals
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith609 Ordering fractions and decimals
 arith624 Addition of aligned decimals
 arith735 Decimal subtraction: Basic
 arith736 Decimal subtraction: Advanced
 arith739 Introduction to decimal multiplication
 arith017 Multiplication of a decimal by a whole number
 arith055 Decimal multiplication: Problem type 1
 arith082 Multiplication of a decimal by a power of ten
 arith081 Division of a decimal by a whole number
 arith083 Division of a decimal by a power of ten
 arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals

arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith834 Converting between percentages and decimals
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith686 Writing a ratio as a percentage
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit012 Time unit conversion with whole number values
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 unit034 Converting between metric and U.S. Customary unit systems

Real Numbers

alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith403 Finding opposites of integers
 arith667 Plotting fractions on a number line
 arith605 Plotting rational numbers on a number line
 arith016 Square root of a perfect square
 arith763 Using a calculator to approximate a square root
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 arith071 Absolute value of a number
 arith412 Finding all numbers with a given absolute value
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2
 arith690 Integer subtraction: Problem type 3
 arith754 Addition and subtraction with 3 integers
 arith231 Integer multiplication and division
 arith800 Multiplication of 3 or 4 integers
 arith116 Signed fraction addition or subtraction: Basic
 arith864 Signed fraction subtraction involving double negation
 arith106 Signed fraction addition or subtraction: Advanced
 arith811 Addition and subtraction of 3 fractions involving signs
 arith822 Signed fraction multiplication: Basic
 arith105 Signed fraction multiplication: Advanced
 arith814 Signed fraction division
 arith117 Signed decimal addition and subtraction
 arith234 Signed decimal addition and subtraction with 3 numbers

arith750 Signed decimal multiplication
arith751 Signed decimal division
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith233 Introduction to exponents
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith821 Exponents and fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3
arith753 Squaring decimal bases: Products greater than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
mstat065 Converting between temperatures in Fahrenheit and Celsius
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge700 Combining like terms: Whole number coefficients
alge432 Introduction to adding fractions with variables and common denominators
alge607 Combining like terms: Integer coefficients
alge187 Properties of addition
alge666 Combining like terms: Fractional coefficients
alge665 Combining like terms: Decimal coefficients
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
alge605 Factoring a linear binomial
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge293 Combining like terms in a quadratic expression

alge650 Identifying solutions to a one-step linear equation: Problem type 1
 alge651 Identifying solutions to a one-step linear equation: Problem type 2
 alge009 Additive property of equality with whole numbers
 alge800 Additive property of equality with decimals
 alge010 Additive property of equality with integers
 alge836 Additive property of equality with signed fractions
 alge008 Multiplicative property of equality with whole numbers
 alge646 Multiplicative property of equality with whole numbers: Fractional answers
 alge820 Multiplicative property of equality with fractions
 alge825 Multiplicative property of equality with decimals
 alge797 Multiplicative property of equality with integers
 alge012 Multiplicative property of equality with signed fractions
 geom151 Measuring an angle with the protractor
 geom300 Perimeter of a square or a rectangle
 geom221 Finding the missing length in a figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom078 Sides of polygons having the same perimeter
 geom019 Area of a square or a rectangle
 geom350 Distinguishing between the area and perimeter of a rectangle
 geom340 Area of a piecewise rectangular figure
 geom562 Area between two rectangles
 alge616 Writing algebraic expressions for the area of a figure
 geom410 Word problem involving the area of a square or a rectangle
 geom142 Word problem involving the area between two rectangles
 geom022 Area of a parallelogram
 geom801 Area of a triangle
 geom023 Area of a trapezoid
 geom016 Circumference of a circle
 geom301 Perimeter involving rectangles and circles
 geom026 Area of a circle
 geom802 Circumference and area of a circle
 geom477 Circumference and area of a circle: Exact answers in terms of pi
 geom570 Distinguishing between the area and circumference of a circle
 geom302 Area involving rectangles and circles
 geom563 Area between two concentric circles
 geom036 Word problem involving the area between two concentric circles
 geom214 Area involving inscribed figures
 geom311 Volume of a rectangular prism
 geom571 Word problem involving the volume of a rectangular prism
 geom558 Word problem involving the rate of filling or emptying a rectangular prism
 geom090 Volume of a triangular prism
 geom035 Volume of a cylinder
 geom573 Word problem involving the volume of a cylinder
 geom092 Word problem involving the rate of filling or emptying a cylinder
 geom033 Volume of a pyramid
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of pi
 geom841 Volume of a sphere
 geom031 Surface area of a cube or a rectangular prism
 geom555 Distinguishing between surface area and volume
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom842 Surface area of a sphere

Linear Equations and Inequalities

alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient

alge006 Solving a two-step equation with integers
 alge815 Introduction to using substitution to solve a linear equation
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 arith504 Writing an equation to represent a proportional relationship
 alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge730 Writing a multi-step equation for a real-world situation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge218 Solving a word problem involving rates and time conversion
 alge823 Solving a one-step word problem using the formula $d = rt$

alge796 Solving a distance, rate, time problem using a linear equation
unit035 Converting between compound units: Basic
unit036 Converting between compound units: Advanced
arith514 Converting a repeating decimal to a fraction
alge819 Solving a proportion of the form $x/a=b/c$: Basic
alge272 Solving a proportion of the form $x/a = b/c$
alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
arith610 Word problem on proportions: Problem type 1
arith611 Word problem on proportions: Problem type 2
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith849 Finding the total amount given the percentage of a partial amount
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith854 Computing a percent mixture
alge795 Solving a percent mixture problem using a linear equation
arith232 Finding simple interest without a calculator
arith853 Introduction to compound interest
geom564 Finding side lengths of squares given an area and a perimeter
geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
geom444 Word problem on optimizing an area or perimeter
geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
geom143 Finding the perimeter or area of a rectangle given one of these values
geom817 Finding a side length given the perimeter and side lengths with variables
geom838 Circumference ratios
geom039 Finding supplementary and complementary angles
geom500 Solving equations involving vertical angles and linear pairs
geom001 Finding an angle measure of a triangle given two angles
geom628 Finding angle measures of a triangle given angles with variables
geom629 Finding angle measures of an isosceles triangle given angles with variables
geom037 Similar polygons
geom038 Similar right triangles
geom337 Indirect measurement
alge015 Translating a sentence by using an inequality symbol
alge845 Translating a sentence into a one-step inequality
alge653 Introduction to identifying solutions to an inequality
alge748 Writing an inequality for a real-world situation
alge017 Graphing a linear inequality on the number line
alge822 Writing an inequality given a graph on the number line
alge186 Translating a sentence into a compound inequality
alge166 Graphing a compound inequality on the number line
alge847 Writing a compound inequality given a graph on the number line
set001 Set builder notation
set002 Union and intersection of finite sets
alge652 Identifying solutions to a one-step linear inequality
alge848 Additive property of inequality with whole numbers
alge849 Additive property of inequality with integers
alge852 Additive property of inequality with signed fractions
alge853 Additive property of inequality with signed decimals
alge809 Multiplicative property of inequality with whole numbers
alge854 Multiplicative property of inequality with integers

alge964 Multiplicative property of inequality with signed fractions
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge621 Solving a word problem using a one-step linear inequality
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Graphing and Functions

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph
 alge696 Finding distances between points that share a common coordinate given their coordinates
 alge282 Function tables with two-step rules
 alge850 Table for a linear equation
 fun005 Writing a function rule given a table of ordered pairs: One-step rules
 fun006 Writing a function rule given a table of ordered pairs: Two-step rules
 arith454 Making a table and plotting points given a unit rate
 alge873 Identifying solutions to a linear equation in two variables
 alge066 Finding a solution to a linear equation in two variables
 alge877 Graphing a linear equation of the form $y = mx$
 alge878 Graphing a line given its equation in slope-intercept form: Integer slope
 alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
 alge880 Graphing a line given its equation in standard form
 alge198 Graphing a vertical or horizontal line
 alge884 Finding x - and y -intercepts given the graph of a line on a grid
 alge924 Finding x - and y -intercepts of a line given the equation: Basic
 alge210 Finding x - and y -intercepts of a line given the equation: Advanced
 alge197 Graphing a line given its x - and y -intercepts
 alge881 Graphing a line by first finding its x - and y -intercepts
 mstat007 Interpreting a line graph
 alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
 alge875 Classifying slopes given graphs of lines
 alge886 Finding slope given the graph of a line on a grid
 alge887 Finding slope given two points on the line
 alge885 Finding the slope of horizontal and vertical lines
 alge888 Finding the coordinate that yields a given slope
 alge259 Graphing a line given its slope and y -intercept

alge196 Graphing a line through a given point with a given slope
alge625 Identifying linear equations: Basic
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y-intercept
alge258 Writing an equation of a line given its slope and y-intercept
alge892 Writing an equation and graphing a line given its slope and y-intercept
alge314 Finding the slope, y-intercept, and equation for a linear function given a table of values
alge893 Writing an equation in slope-intercept form given the slope and a point
alge318 Finding the slope and a point on a line given its equation in point-slope form
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge313 Writing an equation in standard form given the slope and a point
alge070 Writing an equation of a line given the y-intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge322 Comparing linear functions to the parent function $y = x$
geom358 Identifying parallel and perpendicular lines
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
geom462 Identifying parallel and perpendicular lines from coordinates
alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
alge699 Comparing proportional relationships given in different forms
alge655 Writing and evaluating a function that models a real-world situation: Basic
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge654 Graphing ordered pairs and writing an equation from a table of values in context
alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge992 Combining functions to write a new function that models a real-world situation
alge987 Comparing properties of linear functions given in different forms
alge989 Interpreting the parameters of a linear function that models a real-world situation
alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
alge806 Application problem with a linear function: Finding a coordinate given two points
alge670 Identifying independent and dependent quantities from tables and graphs
mstat052 Identifying independent and dependent variables from equations or real-world situations
alge991 Solving a linear equation by graphing
mstat094 Constructing a scatter plot
mstat030 Sketching the line of best fit
mstat023 Scatter plots and correlation
mstat068 Predictions from the line of best fit
mstat067 Approximating the equation of a line of best fit and making predictions
mstat069 Computing residuals
mstat070 Interpreting residual plots
mstat093 Classifying linear and nonlinear relationships from scatter plots
mstat071 Linear relationship and the correlation coefficient
mstat096 Identifying outliers and clustering in scatter plots
mstat074 Identifying correlation and causation
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation

alge828 Interpreting direct variation from a graph
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun030 Evaluating a piecewise-defined function
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 pcalc750 Finding intercepts of a nonlinear function given its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun031 Graphing a piecewise-defined function: Problem type 1
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph
 alge953 Translating the graph of a parabola: One step
 alge723 How the leading coefficient affects the shape of a parabola
 alge898 Translating the graph of an absolute value function: One step
 alge899 Translating the graph of an absolute value function: Two steps
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge185 Writing an equation for a function after a vertical translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 pcalc773 Transforming the graph of a function using more than one transformation
 fun020 Writing an equation for a function after a vertical and horizontal translation

Systems of Linear Equations and Inequalities

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
 pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
 alge317 Writing a system of linear equations given its graph
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution

alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge988 Identifying the operations used to create equivalent systems of equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
 alge316 Writing an inequality given its graph in the plane: Slanted boundary line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix

Exponents and Exponential Functions

alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents

alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 alge971 Table for an exponential function
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)^x$
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)^x$
 alge321 Finding domain and range from the graph of an exponential function
 pcalc922 Translating the graph of an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 mstat103 Choosing an exponential model and using it to make a prediction
 alge993 Comparing linear, polynomial, and exponential functions

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials

alge736 Introduction to the GCF of two monomials
 alge930 Greatest common factor of three univariate monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes

Quadratic Functions

alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge323 Finding the zeros of a quadratic function given its equation
 alge163 Writing a quadratic equation given the roots and the leading coefficient
 alge703 Solving a word problem using a quadratic equation with rational roots
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients

pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge320 Writing a quadratic function given its zeros
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc714 Using a graphing calculator to find the zeros of a quadratic function
 pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 alge319 Rewriting a quadratic function in standard form
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 fun019 Sum, difference, and product of two functions
 alge716 Introduction to the composition of two functions
 fun022 Composition of two functions: Basic
 fun011 Horizontal line test
 fun012 Inverse functions: Linear, discrete
 pcalc114 Even and odd functions: Problem type 1

Radicals

alge413 Finding all square roots of a number
 arith602 Estimating a square root
 arith761 Square roots of integers raised to even exponents
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 alge537 Using absolute value to simplify square roots of perfect square monomials
 arith094 Cube root of an integer
 alge549 Finding nth roots of perfect nth powers with signs
 arith768 Finding the nth root of a perfect nth power fraction
 alge550 Finding the nth root of a perfect nth power monomial
 alge539 Table for a square root function
 alge565 Domain of a square root function: Basic
 alge566 Domain of a square root function: Advanced
 alge543 Graphing a square root function: Problem type 1
 alge544 Graphing a square root function: Problem type 2
 alge545 Graphing a square root function: Problem type 3
 alge812 Converting between radical form and exponent form
 alge560 Rational exponents: Unit fraction exponents and whole number bases
 alge561 Rational exponents: Unit fraction exponents and bases involving signs
 alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge251 Rational exponents: Negative exponents and fractional bases
 alge558 Rational exponents: Product rule
 alge559 Rational exponents: Quotient rule
 alge773 Rational exponents: Products and quotients with negative exponents
 alge562 Rational exponents: Power of a power rule
 alge249 Rational exponents: Powers of powers with negative exponents
 alge080 Simplifying a radical expression with an even exponent
 alge520 Introduction to simplifying a radical expression with an odd exponent
 alge521 Simplifying a radical expression with an odd exponent
 alge275 Simplifying a radical expression with two variables

alge273 Simplifying a higher root of a whole number
 alge551 Introduction to simplifying a higher radical expression
 alge552 Simplifying a higher radical expression: Univariate
 alge811 Simplifying a higher radical expression: Multivariate
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 alge533 Square root addition or subtraction with three terms
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 arith039 Square root multiplication: Advanced
 alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
 alge532 Simplifying a sum or difference of radical expressions: Univariate
 alge084 Simplifying a sum or difference of radical expressions: Multivariate
 alge522 Introduction to simplifying a product of radical expressions: Univariate
 alge523 Simplifying a product of radical expressions: Univariate
 alge640 Simplifying a product of radical expressions: Multivariate
 alge556 Introduction to simplifying a product of higher roots
 alge557 Simplifying a product of higher radical expressions
 alge525 Introduction to simplifying a product involving square roots using the distributive property
 alge526 Simplifying a product involving square roots using the distributive property: Basic
 alge276 Simplifying a product involving square roots using the distributive property: Advanced
 alge774 Special products of radical expressions: Conjugates and squaring
 alge984 Classifying sums and products as rational or irrational
 arith766 Simplifying a quotient of square roots
 alge527 Rationalizing a denominator: Quotient involving square roots
 alge530 Simplifying a quotient involving a sum or difference with a square root
 alge528 Rationalizing a denominator: Square root of a fraction
 alge529 Rationalizing a denominator: Quotient involving a monomial
 alge534 Rationalizing a denominator using conjugates: Integer numerator
 alge535 Rationalizing a denominator using conjugates: Square root in numerator
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
 alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
 alge411 Solving a radical equation with a quadratic expression under the radical
 alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced
 alge698 Solving an equation of the form $x^3 = a$ using integers
 geom565 Finding the side length of a cube given its volume
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom603 Identifying side lengths that give right triangles
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
 alge469 Evaluating a rational function: Problem type 2
 pcalc682 Evaluating functions: Absolute value, rational, radical
 alge715 Domain of a rational function: Excluded values
 alge454 Simplifying a ratio of factored polynomials: Linear factors
 alge455 Simplifying a ratio of factored polynomials: Factors with exponents

alge456 Simplifying a ratio of polynomials using GCF factoring
 alge457 Simplifying a ratio of linear polynomials: 1, -1, and no simplification
 alge458 Simplifying a ratio of polynomials by factoring a quadratic with leading coefficient 1
 alge710 Simplifying a ratio of polynomials: Problem type 1
 alge682 Simplifying a ratio of polynomials: Problem type 2
 alge459 Simplifying a ratio of polynomials: Problem type 3
 alge034 Simplifying a ratio of multivariate polynomials
 alge053 Multiplying rational expressions involving multivariate monomials
 alge460 Multiplying rational expressions made up of linear expressions
 alge620 Multiplying rational expressions involving quadratics with leading coefficients of 1
 alge461 Multiplying rational expressions involving quadratics with leading coefficients greater than 1
 alge462 Multiplying rational expressions involving multivariate quadratics
 alge054 Dividing rational expressions involving multivariate monomials
 alge463 Dividing rational expressions involving linear expressions
 alge766 Dividing rational expressions involving quadratics with leading coefficients of 1
 alge464 Dividing rational expressions involving quadratics with leading coefficients greater than 1
 alge465 Dividing rational expressions involving multivariate quadratics
 alge466 Multiplication and division of 3 rational expressions
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge427 Finding the LCD of rational expressions with linear denominators: Relatively prime
 alge428 Finding the LCD of rational expressions with linear denominators: Common factors
 alge429 Finding the LCD of rational expressions with quadratic denominators
 alge430 Writing equivalent rational expressions with monomial denominators
 alge431 Writing equivalent rational expressions with polynomial denominators
 alge304 Writing equivalent rational expressions involving opposite factors
 alge433 Adding rational expressions with common denominators and monomial numerators
 alge056 Adding rational expressions with common denominators and binomial numerators
 alge434 Adding rational expressions with common denominators and GCF factoring
 alge435 Adding rational expressions with common denominators and quadratic factoring
 alge436 Adding rational expressions with different denominators and a single occurrence of a variable
 alge437 Adding rational expressions with denominators ax and bx : Basic
 alge438 Adding rational expressions with denominators ax and bx : Advanced
 alge439 Adding rational expressions with denominators axn and bxm
 alge440 Adding rational expressions with multivariate monomial denominators: Basic
 alge226 Adding rational expressions with multivariate monomial denominators: Advanced
 alge441 Adding rational expressions with linear denominators without common factors: Basic
 alge442 Adding rational expressions with linear denominators without common factors: Advanced
 alge443 Adding rational expressions with linear denominators with common factors: Basic
 alge444 Adding rational expressions with linear denominators with common factors: Advanced
 alge445 Adding rational expressions with denominators $ax-b$ and $b-ax$
 alge661 Adding rational expressions involving different quadratic denominators
 alge446 Adding 3 rational expressions with different quadratic denominators
 arith696 Complex fraction without variables: Problem type 2
 alge470 Complex fraction involving univariate monomials
 alge058 Complex fraction involving multivariate monomials
 alge471 Complex fraction: GCF factoring
 alge472 Complex fraction: Quadratic factoring
 alge473 Complex fraction made of sums involving rational expressions: Problem type 1
 alge474 Complex fraction made of sums involving rational expressions: Problem type 2
 alge475 Complex fraction made of sums involving rational expressions: Problem type 3
 alge476 Complex fraction made of sums involving rational expressions: Problem type 4
 alge477 Complex fraction made of sums involving rational expressions: Problem type 5
 alge478 Complex fraction made of sums involving rational expressions: Problem type 6
 alge479 Complex fraction made of sums involving rational expressions: Multivariate
 alge205 Solving a rational equation that simplifies to linear: Denominator $x+a$
 alge769 Solving a rational equation that simplifies to linear: Denominators a , x , or ax
 alge421 Solving a rational equation that simplifies to linear: Denominators ax and bx
 alge422 Solving a rational equation that simplifies to linear: Like binomial denominators
 alge206 Solving a rational equation that simplifies to linear: Unlike binomial denominators
 alge423 Solving a rational equation that simplifies to linear: Factorable quadratic denominator
 alge424 Solving a rational equation that simplifies to quadratic: Proportional form, basic

alge425 Solving a rational equation that simplifies to quadratic: Denominator x
 alge212 Solving a rational equation that simplifies to quadratic: Binomial denominators, constant numerators
 alge062 Solving a rational equation that simplifies to quadratic: Binomial denominators and numerators
 alge426 Solving a rational equation that simplifies to quadratic: Factorable quadratic denominator
 alge047 Solving a rational equation that simplifies to quadratic: Proportional form, advanced
 alge508 Solving for a variable in terms of other variables in a rational equation: Problem type 1
 alge509 Solving for a variable in terms of other variables in a rational equation: Problem type 2
 alge510 Solving for a variable in terms of other variables in a rational equation: Problem type 3
 arith612 Word problem involving multiple rates
 alge770 Solving a work problem using a rational equation
 alge450 Solving a distance, rate, time problem using a rational equation
 alge059 Ordering fractions with variables
 alge905 Writing an inverse variation equation
 alge903 Identifying direct and inverse variation equations
 alge902 Identifying direct and inverse variation from ordered pairs and writing equations
 alge176 Word problem on inverse variation
 alge220 Word problem on inverse proportions
 pcalc681 Writing an equation that models variation
 alge772 Word problem on combined variation
 pcalc917 Finding the asymptotes of a rational function: Constant over linear
 pcalc918 Finding the asymptotes of a rational function: Linear over linear
 alge515 Graphing a rational function: Constant over linear
 alge516 Graphing a rational function: Linear over linear

Sequences, Parabolas, and Circles

alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 pcalc566 Graphing a parabola of the form $y^2 = ax$ or $x^2 = ay$
 geom494 Deriving the equation of a parabola given its focus and directrix
 geom496 Identifying the center and radius to graph a circle given its equation in standard form
 geom497 Identifying the center and radius to graph a circle given its equation in general form: Basic
 geom668 Identifying the center and radius to graph a circle given its equation in general form: Advanced
 geom499 Writing the equation of a circle centered at the origin given its radius or a point on the circle
 geom495 Writing an equation of a circle and identifying points that lie on the circle
 geom498 Writing an equation of a circle given its center and radius or diameter
 geom493 Deriving the equation of a circle using the Pythagorean Theorem
 pcalc065 Writing an equation of a circle given its center and a point on the circle
 pcalc066 Writing an equation of a circle given the endpoints of a diameter

Statistics, Probability, and Trigonometry

mstat088 Identifying statistical questions
mstat080 Choosing an appropriate method for gathering data: Problem type 1
mstat081 Choosing an appropriate method for gathering data: Problem type 2
mstat047 Introduction to expectation
mstat097 Constructing a two-way frequency table: Basic
mstat098 Constructing a two-way frequency table: Advanced
mstat049 Computing a percentage from a table of values
mstat087 Making an inference using a two-way frequency table
stat020 Calculating relative frequencies in a contingency table
stat805 Making a reasonable inference based on proportion statistics
mstat037 Constructing a line plot
mstat004 Constructing a histogram for numerical data
mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat031 Interpreting a stem-and-leaf plot
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
geom814 Angle measure in a circle graph
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
stat009 Percentiles
mstat078 Comparing measures of center and variation
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat090 Comparing sample means
mstat082 Computing mean absolute deviation from a list of numerical values
mstat042 Interpreting a Venn diagram of 2 sets
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
stat790 Permutations, combinations, and the multiplication principle for counting
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
mstat046 Experimental and theoretical probability
stat106 Outcomes and event probability
stat112 Probabilities involving two dice
mstat116 Probabilities of a permutation and a combination
mstat048 Odds of an event

mstat011 Area as probability
mstat019 Identifying independent events given descriptions of experiments
mstat012 Probability of independent events
mstat013 Probability of dependent events
stat117 Probabilities of draws with replacement
stat118 Probabilities of draws without replacement
mstat115 Determining outcomes for compound events and complements of events
mstat110 Using a Venn diagram to understand the multiplication rule for probability
mstat107 Outcomes and event probability: Conditional probability
mstat104 Identifying independent events given values of probabilities
mstat105 Computing conditional probability using a two-way frequency table
mstat106 Computing conditional probability to make an inference using a two-way frequency table
mstat118 Conditional probability: Basic
mstat109 Using a Venn diagram to understand the addition rule for probability
mstat108 Outcomes and event probability: Addition rule
mstat032 Probability of the union of two events
mstat117 Probability of intersection or union: Word problems
mstat085 Identifying outcomes in a random number table used to simulate a compound event
mstat086 Using a random number table to simulate a compound event
mstat114 Using a random number table to make a fair decision
stat021 Population standard deviation
stat852 Word problem involving calculations from a normal distribution
pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
pcalc616 Using a calculator to approximate sine, cosine, and tangent values
pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
pcalc008 Finding trigonometric ratios given a right triangle
geom317 Understanding trigonometric ratios through similar right triangles
geom316 Relationship between the sines and cosines of complementary angles
geom318 Using similar right triangles to find trigonometric ratios
pcalc607 Using a trigonometric ratio to find a side length in a right triangle
pcalc610 Using trigonometry to find a length in a word problem with one right triangle
pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
pcalc642 Solving a right triangle
geom860 Special right triangles: Decimal answers
geom506 Special right triangles: Exact answers
pcalc002 Converting between degree and radian measure: Problem type 1
pcalc031 Solving a triangle with the law of sines: Problem type 1
pcalc032 Solving a triangle with the law of sines: Problem type 2
pcalc644 Solving a word problem using the law of sines
geom320 Proving the law of sines
pcalc033 Solving a triangle with the law of cosines
pcalc645 Solving a word problem using the law of cosines
geom409 Proving the law of cosines
geom439 Using trigonometry to find the area of a right triangle
pcalc646 Finding the area of a triangle using trigonometry
geom319 Expressing the area of a triangle in terms of the sine of one of its angles
pcalc647 Heron's formula
pcalc060 Magnitude of a vector given in component form
pcalc739 Multiplication of a vector by a scalar: Geometric approach
pcalc063 Translation of a vector
geom856 Vector addition and scalar multiplication: Component form
vector008 Linear combination of vectors: Component form
geom857 Vector addition: Geometric approach
vector007 Vector subtraction: Geometric approach
vector002 Finding the magnitude and direction of a vector given its graph
vector005 Finding the components of a vector given its graph

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Whole Numbers and Integers

arith124 Whole number place value: Problem type 1
arith125 Whole number place value: Problem type 2
arith066 Expanded form
arith643 Expanded form with zeros
arith028 Numeral translation: Problem type 1
arith060 Numeral translation: Problem type 2
arith630 Addition with carry to the hundreds place
arith012 Addition of large numbers
arith006 Subtraction with borrowing
arith682 Subtraction with multiple regrouping steps
arith637 Subtraction and regrouping with zeros
arith613 Word problem with addition or subtraction of whole numbers
mstat061 Describing an increasing or decreasing pattern from a table of values
arith126 Multiplication as repeated addition
arith004 Multiplication with carry
arith615 Introduction to multiplication of large numbers
arith675 Understanding multiplication of a one-digit number with a larger number
arith014 Multiplication of large numbers
arith641 Multiples: Problem type 1
arith642 Multiples: Problem type 2
arith614 Word problem with multiplication or division of whole numbers
arith130 Word problem with multiplication and addition or subtraction of whole numbers
arith451 Word problem on unit rates associated with ratios of whole numbers: Whole number answers
arith243 Division of whole numbers given in fractional form
arith711 Division involving zero
arith005 Division with carry
arith901 Whole number division: 2-digit by 2-digit, no remainder
arith902 Whole number division: 3-digit by 2-digit, no remainder
arith616 Quotient and remainder: Problem type 1
arith617 Quotient and remainder: Problem type 2
arith631 Quotient and remainder: Problem type 3
arith650 Division involving quotients with intermediate zeros
arith023 Word problem with division of whole numbers and rounding
arith651 Introduction to inequalities
arith652 Comparing a numerical expression with a number
arith077 Ordering large numbers
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith061 Rounding to thousands, ten thousands, or hundred thousands
arith101 Estimating a sum of whole numbers
arith102 Estimating a difference of whole numbers
arith677 Estimating a product
arith678 Estimating a quotient
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith645 Introduction to parentheses
arith865 Comparing numerical expressions with parentheses
arith681 Introduction to order of operations
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith646 Even and odd numbers
arith647 Divisibility rules for 2, 5, and 10
arith648 Divisibility rules for 3 and 9
arith056 Factors

arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
arith410 Introduction to factoring with numbers
arith411 Factoring a sum or difference of whole numbers
arith070 Least common multiple of 2 numbers
arith804 Least common multiple of 3 numbers
arith418 Word problem involving the least common multiple of 2 numbers
arith240 Word problem with common multiples
alge286 Plotting integers on a number line
arith691 Ordering integers
arith415 Using a number line to compare integers
arith699 Writing a signed number for a real-world situation
arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
arith416 Comparing signed numbers relating to a real-world situation
arith402 Plotting opposite integers on a number line
arith403 Finding opposites of integers
arith071 Absolute value of a number
arith412 Finding all numbers with a given absolute value
arith200 Integer addition: Problem type 1
arith108 Integer addition: Problem type 2
arith431 Identifying a sum as a point located a given distance from another point
arith430 Identifying relative change when combining two quantities
arith688 Integer subtraction: Problem type 1
arith689 Integer subtraction: Problem type 2
arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith433 Computing and understanding distances between integers on a number line
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
alge733 Writing a one-step expression for a real-world situation
alge831 Translating a phrase into a one-step expression
alge291 Translating a phrase into a two-step expression
geom339 Perimeter of a polygon
geom300 Perimeter of a square or a rectangle
geom019 Area of a square or a rectangle
geom866 Perimeter and area on a grid
geom311 Volume of a rectangular prism
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2

alge009 Additive property of equality with whole numbers
alge010 Additive property of equality with integers
alge008 Multiplicative property of equality with whole numbers
alge797 Multiplicative property of equality with integers

Fractions

arith623 Introduction to fractions
arith665 Understanding equivalent fractions
arith212 Equivalent fractions
arith666 Introduction to simplifying a fraction
arith067 Simplifying a fraction
alge660 Identifying equivalent signed fractions
arith687 Fractional position on a number line
arith667 Plotting fractions on a number line
arith044 Ordering fractions with the same denominator
arith091 Ordering fractions with the same numerator
arith092 Using a common denominator to order fractions
arith079 Product of a unit fraction and a whole number
arith086 Product of a fraction and a whole number: Problem type 1
arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith509 Modeling multiplication of proper fractions
arith813 Multiplication of 3 fractions
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith507 Fact families for multiplication and division of fractions
arith508 Modeling division of a whole number by a fraction
arith814 Signed fraction division
arith819 Word problem involving fractions and division
arith618 Addition or subtraction of fractions with the same denominator
arith802 Addition or subtraction of fractions with the same denominator and simplification
alge432 Introduction to adding fractions with variables and common denominators
arith801 Finding the LCD of two fractions
arith109 Addition or subtraction of unit fractions
arith664 Introduction to addition or subtraction of fractions with different denominators
arith230 Addition or subtraction of fractions with different denominators
arith803 Addition and subtraction of 3 fractions with different denominators
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith805 Word problem involving addition or subtraction of fractions with different denominators
arith100 Fractional part of a circle
arith662 Writing a mixed number and an improper fraction for a shaded region
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith605 Plotting rational numbers on a number line
arith215 Addition or subtraction of mixed numbers with the same denominator
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry

arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith821 Exponents and fractions
alge790 Evaluating expressions with exponents of zero
arith704 Exponents and signed fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3
arith695 Complex fraction without variables: Problem type 1
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge801 Additive property of equality with fractions and mixed numbers
alge836 Additive property of equality with signed fractions
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions
alge012 Multiplicative property of equality with signed fractions

Decimals

arith127 Writing a decimal and a fraction for a shaded region
arith110 Decimal place value: Tenths and hundredths
arith220 Decimal place value: Hundreds to ten thousandths
arith714 Writing a decimal number less than 1 given its name
arith715 Writing a decimal number greater than 1 given its name
arith716 Writing a decimal number given its name: Advanced
arith829 Reading decimal position on a number line: Tenths
arith830 Reading decimal position on a number line: Hundredths
arith831 Understanding decimal position on a number line using zoom: Hundredths
arith832 Understanding decimal position on a number line using zoom: Thousandths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith221 Rounding decimals
arith717 Converting a decimal to a proper fraction without simplifying: Basic
arith719 Converting a decimal to a proper fraction without simplifying: Advanced
arith718 Converting a decimal to a proper fraction in simplest form: Basic
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith721 Converting a decimal to a mixed number and an improper fraction without simplifying
arith722 Converting a decimal to a mixed number and an improper fraction in simplest form: Basic
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith734 Subtraction of aligned decimals
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith131 Estimating a decimal sum or difference
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
geom525 Computing distances between decimals on the number line
arith132 Word problem with addition or subtraction of 2 decimals
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith739 Introduction to decimal multiplication
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1

arith046 Decimal multiplication: Problem type 2
 arith082 Multiplication of a decimal by a power of ten
 arith738 Multiplication of a decimal by a power of 0.1
 arith740 Multiplication of decimals that have a product less than 0.1
 arith752 Estimating a product of decimals
 arith750 Signed decimal multiplication
 arith135 Word problem with multiplication of a decimal and a whole number
 arith137 Word problem with multiplication of two decimals
 arith628 Word problem with multiple decimal operations: Problem type 1
 arith744 Whole number division with decimal answers
 arith081 Division of a decimal by a whole number
 arith743 Division of a decimal by a 1-digit decimal
 arith019 Division of a decimal by a 2-digit decimal
 arith083 Division of a decimal by a power of ten
 arith742 Division of a decimal by a power of 0.1
 arith745 Decimal division with rounding
 arith751 Signed decimal division
 arith136 Word problem with division of a decimal and a whole number
 arith138 Word problem with division of two decimals
 arith629 Word problem with multiple decimal operations: Problem type 2
 arith103 Average of two numbers
 arith725 Converting a fraction with a denominator of 10 or 100 to a decimal
 arith726 Converting a fraction with a denominator of 100 or 1000 to a decimal
 arith113 Converting a proper fraction with a denominator of 2, 4, or 5 to a decimal
 arith114 Converting a mixed number with a denominator of 2, 4, or 5 to a decimal
 arith727 Converting a fraction to a terminating decimal: Basic
 arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith733 Using a calculator to convert a fraction to a rounded decimal
 arith111 Converting a mixed number to a terminating decimal: Basic
 arith112 Converting a mixed number to a terminating decimal: Advanced
 arith732 Converting a fraction or mixed number to a rounded decimal
 arith609 Ordering fractions and decimals
 alge001 Identifying numbers as integers or non-integers
 arith513 Identifying rational decimal numbers
 arith753 Squaring decimal bases: Products greater than 0.1
 arith741 Exponents and decimals: Products less than 0.1
 arith720 Order of operations with decimals: Problem type 1
 arith746 Order of operations with decimals: Problem type 2
 arith747 Order of operations with decimals: Problem type 3
 arith748 Addition or subtraction with a decimal and a mixed number
 arith749 Multiplication with a decimal and a fraction
 alge302 Evaluating a linear expression: Signed decimal addition and subtraction
 alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
 alge800 Additive property of equality with decimals
 alge825 Multiplicative property of equality with decimals

Ratios, Proportions, and Measurement

arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith505 Word problem on unit rates associated with ratios of fractions

arith506 Word problem on unit rates associated with ratios of mixed numbers
 arith064 Solving a word problem on proportions using a unit rate
 alge823 Solving a one-step word problem using the formula $d = rt$
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith504 Writing an equation to represent a proportional relationship
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith045 Word problem with powers of ten
 arith500 Identifying proportional relationships in tables by calculating unit rates: Whole numbers
 arith510 Identifying proportional relationships in tables by calculating unit rates: Fractions
 geom359 Identifying congruent shapes on a grid
 geom360 Identifying similar or congruent shapes on a grid
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models
 geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale
 mstat058 Choosing a measuring tool
 mstat059 Choosing U.S. Customary measurement units
 mstat033 Measuring length to the nearest inch
 mstat034 Measuring length to the nearest quarter or half inch
 unit005 U.S. Customary unit conversion with whole number values
 mstat035 Conversions involving measurements in feet and inches
 mstat036 Adding measurements in feet and inches
 unit006 U.S. Customary unit conversion with whole number values: Two-step conversion
 unit007 U.S. Customary unit conversion with mixed number values: One-step conversion
 unit008 U.S. Customary unit conversion with mixed number values: Two-step conversion
 unit009 U.S. Customary area unit conversion with whole number values
 mstat060 Choosing metric measurement units
 mstat063 Measuring length to the nearest centimeter
 mstat064 Measuring length to the nearest millimeter
 unit001 Metric distance conversion with whole number values
 unit002 Metric mass or capacity conversion with whole number values
 unit003 Metric distance conversion with decimal values
 unit004 Metric conversion with decimal values: Two-step problem
 unit010 Metric area unit conversion with decimal values
 unit012 Time unit conversion with whole number values
 time009 Introduction to adding time
 time006 Adding time
 time011 Introduction to elapsed time
 time007 Elapsed time
 mstat062 Reading a positive temperature from a thermometer
 mstat038 Reading the temperature from a thermometer
 mstat065 Converting between temperatures in Fahrenheit and Celsius
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 alge218 Solving a word problem involving rates and time conversion
 unit034 Converting between metric and U.S. Customary unit systems
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced

Percents

arith836 Converting a fraction with a denominator of 100 to a percentage
 arith837 Converting a percentage to a fraction with a denominator of 100
 arith674 Finding the percentage of a grid that is shaded

arith903 Representing benchmark percentages on a grid
arith723 Introduction to converting a percentage to a decimal
arith833 Introduction to converting a decimal to a percentage
arith834 Converting between percentages and decimals
arith841 Converting a mixed number percentage to a decimal
arith835 Converting between percentages and decimals in a real-world situation
arith090 Converting a percentage to a fraction in simplest form
arith839 Converting a decimal percentage to a fraction
arith838 Converting a fraction to a percentage: Denominator of 4, 5, or 10
arith904 Finding benchmark fractions and percentages for a figure
arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
arith843 Using a calculator to convert a fraction to a rounded percentage
arith842 Converting a fraction to a percentage in a real-world situation
arith840 Finding a percentage of a whole number
arith030 Finding a percentage of a whole number without a calculator: Basic
arith844 Finding a percentage of a whole number without a calculator: Advanced
arith862 Applying the percent equation: Problem type 1
arith863 Applying the percent equation: Problem type 2
arith845 Finding a percentage of a total amount: Real-world situations
arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
arith857 Estimating a tip without a calculator
arith069 Writing a ratio as a percentage without a calculator
arith850 Finding the rate of a tax or commission
arith849 Finding the total amount given the percentage of a partial amount
stat805 Making a reasonable inference based on proportion statistics
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
arith851 Finding the final amount given the original amount and a percentage increase or decrease
arith847 Finding the sale price given the original price and percent discount
arith074 Finding the sale price without a calculator given the original price and percent discount
arith848 Finding the total cost including tax or markup
arith855 Finding the original amount given the result of a percentage increase or decrease
arith031 Finding the original price given the sale price and percent discount
arith858 Finding the percentage increase or decrease: Basic
arith225 Finding the percentage increase or decrease: Advanced
unit052 Finding the absolute error and percent error of a measurement
arith232 Finding simple interest without a calculator
arith853 Introduction to compound interest
arith915 Calculating income tax
arith918 Comparing discounts
arith909 Examining a savings plan for college
arith914 Calculations involving paying for college
arith920 Comparing total costs for attending different colleges
arith922 Distinguishing between fixed and variable expenses
arith916 Computing percentages for categories of a budget
arith919 Computations involving cost of living and hourly wage
arith921 Comparing annual salaries of different occupations
arith911 Calculations involving purchases with debit and credit cards
arith950 Comparing costs of checking accounts
arith951 Balancing a check register
arith912 Reading a credit report
arith913 Understanding the impact of a credit score
arith917 Computing a person's net worth
arith906 Calculating and comparing monthly payments using the ALEKS loan calculator
arith907 Calculating monthly payment, total payment, and interest using the ALEKS loan calculator
arith908 Calculating and comparing total loan payments using the ALEKS loan calculator
arith910 Calculating and comparing simple interest and compound interest

Equations and Inequalities

alge647 Identifying like terms
alge700 Combining like terms: Whole number coefficients
alge607 Combining like terms: Integer coefficients
arith655 Introduction to properties of addition
alge187 Properties of addition
alge666 Combining like terms: Fractional coefficients
alge665 Combining like terms: Decimal coefficients
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
alge605 Factoring a linear binomial
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
arith656 Introduction to properties of multiplication
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge293 Combining like terms in a quadratic expression
alge436 Adding rational expressions with different denominators and a single occurrence of a variable
alge834 Identifying solutions to a linear equation in one variable: Two-step equations
alge803 Using two steps to solve an equation with whole numbers
alge266 Additive property of equality with a negative coefficient
alge006 Solving a two-step equation with integers
alge200 Solving an equation to find the value of an expression
alge920 Introduction to solving an equation with parentheses
alge837 Solving a multi-step equation given in fractional form
alge986 Identifying properties used to solve a linear equation
alge824 Solving a two-step equation with signed decimals
alge838 Introduction to solving an equation with variables on the same side
alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
alge611 Introduction to solving a linear equation with a variable on each side
alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
alge614 Clearing fractions in an equation
alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
alge208 Solving a two-step equation with signed fractions
alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
alge742 Solving equations with zero, one, or infinitely many solutions
alge840 Solving a proportion of the form $(x+a) \div b = c \div d$
alge271 Solving a proportion of the form $a/(x+b) = c/x$
alge658 Introduction to solving a rational equation
alge060 Solving a rational equation that simplifies to linear: Denominator x
alge603 Introduction to solving an absolute value equation
alge864 Solving an absolute value equation: Problem type 1
alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
alge517 Solving for a variable in terms of other variables using addition or subtraction with division
alge518 Solving for a variable inside parentheses in terms of other variables
alge507 Solving for a variable in terms of other variables in a linear equation with fractions
alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
alge016 Translating a sentence into a one-step equation

alge671 Choosing stories that can be represented by given one-step equations
 alge841 Translating a sentence into a multi-step equation
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge795 Solving a percent mixture problem using a linear equation
 alge796 Solving a distance, rate, time problem using a linear equation
 alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge621 Solving a word problem using a one-step linear inequality
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality

Graphing, Functions, and Sequences

alge278 Reading a point in quadrant 1
 alge279 Plotting a point in quadrant 1
 alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge692 Plotting a point in quadrant 1: Mixed number coordinates
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph

alge696 Finding distances between points that share a common coordinate given their coordinates
alge191 Midpoint of a line segment in the plane
alge282 Function tables with two-step rules
alge850 Table for a linear equation
fun005 Writing a function rule given a table of ordered pairs: One-step rules
fun006 Writing a function rule given a table of ordered pairs: Two-step rules
alge873 Identifying solutions to a linear equation in two variables
alge066 Finding a solution to a linear equation in two variables
alge280 Graphing a line in quadrant 1
alge877 Graphing a linear equation of the form $y = mx$
alge878 Graphing a line given its equation in slope-intercept form: Integer slope
alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
alge880 Graphing a line given its equation in standard form
alge198 Graphing a vertical or horizontal line
alge884 Finding x - and y -intercepts given the graph of a line on a grid
alge924 Finding x - and y -intercepts of a line given the equation: Basic
alge210 Finding x - and y -intercepts of a line given the equation: Advanced
alge197 Graphing a line given its x - and y -intercepts
alge881 Graphing a line by first finding its x - and y -intercepts
alge874 Identifying linear functions given ordered pairs
geom358 Identifying parallel and perpendicular lines
mstat007 Interpreting a line graph
arith454 Making a table and plotting points given a unit rate
arith501 Identifying proportional relationships in graphs: Basic
arith502 Identifying proportional relationships in graphs: Advanced
arith512 Finding outputs and rate of increase given the graph of a line that models a real-world situation
alge699 Comparing proportional relationships given in different forms
alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge814 Using right triangles to find the slope of a line
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y -intercept
alge196 Graphing a line through a given point with a given slope
alge982 Identifying direct variation equations
alge938 Identifying direct variation from ordered pairs and writing equations
alge904 Writing a direct variation equation
alge175 Word problem on direct variation
alge828 Interpreting direct variation from a graph
alge905 Writing an inverse variation equation
alge903 Identifying direct and inverse variation equations
alge902 Identifying direct and inverse variation from ordered pairs and writing equations
alge176 Word problem on inverse variation
alge220 Word problem on inverse proportions
alge625 Identifying linear equations: Basic
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y -intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y -intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y -intercept
alge258 Writing an equation of a line given its slope and y -intercept
alge892 Writing an equation and graphing a line given its slope and y -intercept
alge893 Writing an equation in slope-intercept form given the slope and a point
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge070 Writing an equation of a line given the y -intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations

geom808 Writing equations of lines parallel and perpendicular to a given line through a point
 alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
 alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
 alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
 alge655 Writing and evaluating a function that models a real-world situation: Basic
 alge897 Writing and evaluating a function that models a real-world situation: Advanced
 alge654 Graphing ordered pairs and writing an equation from a table of values in context
 alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
 alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
 alge817 Finding the initial amount and rate of change given a table for a linear function
 alge818 Finding the initial amount and rate of change given a graph of a linear function
 alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge913 Graphing an absolute value equation of the form $y = A - x -$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge262 Graphing a cubic function of the form $y = ax^3$
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge732 Finding patterns in shapes
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge914 Identifying solutions to a system of linear equations
 alge725 Graphically solving a system of linear equations

alge815 Introduction to using substitution to solve a linear equation
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 pcalc038 Addition or subtraction of matrices
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced

Exponents, Polynomials, and Radicals

alge686 Introduction to the product rule with positive exponents: Whole number base
 alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 alge690 Introduction to the power of a power rule with positive exponents: Whole number base
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge688 Introduction to the quotient rule with positive exponents: Whole number base
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 arith029 Ordering numbers with positive exponents
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge687 Introduction to the product rule with negative exponents: Whole number base
 alge961 Introduction to the product rule with negative exponents
 alge689 Introduction to the quotient rule with negative exponents: Whole number base
 alge755 Quotient rule with negative exponents: Problem type 1
 alge691 Introduction to the power of a power rule with negative exponents: Whole number base
 alge025 Power of a power rule with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot025 Estimating numbers using scientific notation
 scinot020 Choosing metric units and converting to the base unit in scientific notation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced

scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
 scinot015 Adding or subtracting numbers written in scientific notation: Same exponents, basic
 scinot022 Adding or subtracting numbers written in scientific notation: Same exponents, advanced
 scinot016 Adding or subtracting numbers written in scientific notation: Different exponents
 scinot017 Estimating the sum or difference of two numbers written in scientific notation
 alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge032 Squaring a binomial: Univariate
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge737 Introduction to the LCM of two monomials
 alge055 Least common multiple of two monomials
 alge736 Introduction to the GCF of two monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge039 Factoring a quadratic with leading coefficient 1
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge290 Factoring a difference of squares in one variable: Basic
 alge947 Factoring a difference of squares in one variable: Advanced
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 arith016 Square root of a perfect square
 arith601 Square root of a rational perfect square
 alge413 Finding all square roots of a number
 arith760 Square roots of perfect squares with signs
 arith763 Using a calculator to approximate a square root
 arith602 Estimating a square root
 alge567 Using numerical methods to approximate a square root to the nearest tenth
 alge568 Using numerical methods to approximate a square root to the nearest hundredth
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 arith514 Converting a repeating decimal to a fraction
 arith432 Identifying true statements about rational and irrational numbers
 alge002 Identifying numbers as rational or irrational
 alge415 Introduction to simplifying a radical expression with an even exponent
 alge264 Square root of a perfect square monomial
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge080 Simplifying a radical expression with an even exponent
 arith767 Introduction to square root addition or subtraction
 arith032 Square root addition or subtraction
 arith764 Introduction to square root multiplication
 arith765 Square root multiplication: Basic
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 geom564 Finding side lengths of squares given an area and a perimeter
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge542 Word problem involving radical equations: Basic
 arith094 Cube root of an integer
 alge698 Solving an equation of the form $x^3 = a$ using integers
 alge093 Solving an equation using the odd-root property: Problem type 1
 geom565 Finding the side length of a cube given its volume
 alge560 Rational exponents: Unit fraction exponents and whole number bases

alge250 Rational exponents: Non-unit fraction exponent with a whole number base
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 alge675 Using the Pythagorean Theorem to find distance on a grid
 alge132 Distance between two points in the plane: Exact answers

Angles, Lines, and Polygons

geom151 Measuring an angle with the protractor
 geom152 Drawing an angle with the protractor
 geom303 Acute, obtuse, and right angles
 geom039 Finding supplementary and complementary angles
 geom551 Finding the complement or supplement of an angle given a figure
 geom552 Solving an equation involving complementary or supplementary angles
 geom305 Identifying supplementary and vertical angles
 geom553 Finding angle measures given two intersecting lines
 geom530 Solving equations involving vertical angles
 geom304 Identifying corresponding and alternate angles
 geom349 Naming segments, rays, and lines
 geom554 Finding angle measures given two parallel lines cut by a transversal
 geom531 Solving equations involving angles and a pair of parallel lines
 geom584 Establishing facts about the angles created when parallel lines are cut by a transversal
 geom154 Constructing the perpendicular bisector of a line segment
 geom158 Constructing an angle bisector
 geom159 Constructing congruent angles
 geom150 Constructing a pair of perpendicular lines
 geom157 Constructing a pair of parallel lines
 geom306 Acute, obtuse, and right triangles
 geom307 Classifying scalene, isosceles, and equilateral triangles by side lengths or angles
 geom001 Finding an angle measure of a triangle given two angles
 geom860 Special right triangles: Decimal answers
 geom908 Finding an angle measure for a triangle with an extended side
 geom812 Finding an angle measure given extended triangles
 geom813 Finding an angle measure given a triangle and parallel lines
 geom623 Finding angle measures of a triangle given angles with variables
 geom502 Finding angle measures of a right or isosceles triangle given angles with variables
 geom309 Finding an angle measure for a triangle sharing a side with another triangle
 geom586 Establishing facts about the interior angles of a triangle
 geom587 Establishing facts about the interior and exterior angles of a triangle
 geom543 Drawing a circle with a given radius or diameter
 geom544 Creating triangles from given side lengths: Problem type 1
 geom634 Creating triangles from given side lengths: Problem type 2
 geom844 Using triangle inequality to determine if side lengths form a triangle
 geom548 Determining if a triangle is possible based on given angle measures
 geom549 Determining if given measurements define a unique triangle, more than one triangle, or no triangle
 geom546 Drawing triangles with given conditions: Angle measures
 geom547 Drawing triangles with given conditions: Side lengths and angle measures
 geom545 Drawing triangles with given side lengths using a compass
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 geom361 Naming polygons
 mstat042 Interpreting a Venn diagram of 2 sets

geom536 Drawing and identifying a polygon in the coordinate plane
 geom867 Identifying parallelograms, rectangles, and squares
 geom310 Properties of quadrilaterals
 geom532 Classifying parallelograms
 geom818 Finding the coordinates of a point to make a parallelogram
 geom870 Sum of the angle measures of a quadrilateral
 geom852 The sum of interior angle measures in a convex polygon

Transformations

geom519 Identifying and naming congruent parts of congruent triangles
 geom520 Identifying and naming congruent triangles
 geom583 Finding angle measures of a triangle given two angles of a similar triangle
 geom585 Finding angle measures and side ratios to determine if two triangles are similar
 geom357 Identifying transformations
 geom596 Translating a point and giving its coordinates: One step
 geom909 Translating a point and giving its coordinates: Two steps
 geom597 Properties of translated figures
 geom598 Determining if figures are related by a translation
 geom330 Translating a polygon
 geom331 Using a translated point to find coordinates of other translated points
 arith408 Reflecting a point across an axis
 geom533 Reflecting a point across both coordinate axes
 geom590 Reflecting a point across an axis and giving its coordinates
 arith407 Finding the coordinates of a point reflected across an axis
 geom560 Finding the coordinates of a point reflected across both axes
 geom534 Reflecting a polygon across the x-axis or y-axis
 geom591 Properties of reflected figures
 geom592 Determining if figures are related by a reflection
 geom332 Reflecting a polygon over a vertical or horizontal line
 geom333 Finding the coordinates of three points reflected over an axis
 geom334 Drawing lines of symmetry
 geom602 Finding the coordinates of a point reflected across an axis and translated
 geom815 Finding an angle of rotation
 geom624 Identifying rotational symmetry and angles of rotation
 geom593 Rotating a point and giving its coordinates
 geom594 Properties of rotated figures
 geom595 Determining if figures are related by a rotation
 geom335 Rotating a figure about the origin
 geom580 Determining if figures are congruent and related by a transformation
 geom581 Determining if figures are congruent and related by a sequence of transformations
 geom606 Dilating a segment and giving the coordinates of its endpoints
 geom607 The effect of dilation on side length
 geom608 Determining if figures are related by a dilation
 geom636 The effect of dilation on area
 geom336 Dilating a figure
 geom582 Determining if figures are similar and related by a sequence of transformations

Perimeters, Areas, and Volumes

geom618 Perimeter of a polygon involving mixed numbers and fractions
 geom078 Sides of polygons having the same perimeter
 geom221 Finding the missing length in a figure
 geom353 Perimeter of a piecewise rectangular figure
 alge615 Writing algebraic expressions for the perimeter of a figure
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom217 Finding the side length of a rectangle given its perimeter or area
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides

geom620 Area of a rectangle involving fractions
geom619 Area of a rectangle involving mixed numbers and fractions
geom350 Distinguishing between the area and perimeter of a rectangle
geom351 Areas of rectangles with the same perimeter
geom869 Estimates and exact answers
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom143 Finding the perimeter or area of a rectangle given one of these values
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
geom142 Word problem involving the area between two rectangles
geom501 Finding the area of a right triangle on a grid
geom509 Finding the area of a right triangle or its corresponding rectangle
geom801 Area of a triangle
geom517 Finding the area of a trapezoid on a grid by using triangles and rectangles
geom344 Area involving rectangles and triangles
alge724 Finding an area in terms of variables
geom022 Area of a parallelogram
geom023 Area of a trapezoid
geom537 Finding the perimeter or area of a rectangle in the coordinate plane
geom832 Area of quadrilaterals in the coordinate plane
geom603 Identifying side lengths that give right triangles
geom589 Demonstrating the converse of the Pythagorean Theorem
geom588 Informal proof of the Pythagorean Theorem
geom347 Introduction to a circle: Diameter, radius, and chord
geom343 Identifying central angles, inscribed angles, arcs, chords, and tangents of a circle
geom016 Circumference of a circle
geom218 Finding the radius or the diameter of a circle given its circumference
geom838 Circumference ratios
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom570 Distinguishing between the area and circumference of a circle
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom126 Area of a sector of a circle: Exact answer in terms of pi
geom868 Classifying solids
geom348 Vertices, edges, and faces of a solid
geom830 Counting the cubes in a solid made of cubes
geom816 Side views of a solid made of cubes
geom550 Identifying horizontal and vertical cross sections of solids
geom354 Volume of a rectangular prism made of unit cubes
geom518 Volume of a solid made of cubes with unit fraction edge lengths
geom535 Volume of a rectangular prism with fractional edge lengths
alge617 Writing equivalent expressions for the volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom505 Volume of a piecewise rectangular prism
geom090 Volume of a triangular prism
geom572 Word problem involving the volume of a triangular prism
geom033 Volume of a pyramid
geom637 Relating the volumes of a rectangular prism and a rectangular pyramid
geom638 Relating the volumes of a triangular prism and a triangular pyramid
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder
geom092 Word problem involving the rate of filling or emptying a cylinder
geom622 Volume of a cone
geom086 Volume of a cone: Exact answers in terms of pi
geom639 Relating the volumes of a cylinder and a cone
geom575 Word problem involving the volume of a cone

geom841 Volume of a sphere
 geom574 Word problem involving the volume of a sphere
 geom133 Ratio of volumes
 geom219 Nets of solids
 geom031 Surface area of a cube or a rectangular prism
 geom632 Surface area of a rectangular prism made of unit cubes
 geom555 Distinguishing between surface area and volume
 geom556 Using a net to find the surface area of a rectangular prism
 geom576 Word problem involving the surface area of a rectangular prism
 geom345 Surface area of a piecewise rectangular prism made of unit cubes
 geom091 Surface area of a triangular prism
 geom557 Using a net to find the surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of pi
 geom578 Word problem involving the surface area of a cylinder
 geom842 Surface area of a sphere
 geom338 Surface area involving prisms or cylinders
 geom846 Computing ratios of side lengths, surface areas, and volumes for similar solids
 geom847 Similar solids: Problem type 2

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat056 Interpreting a tally table
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 mstat037 Constructing a line plot
 mstat005 Constructing a bar graph for non-numerical data
 mstat004 Constructing a histogram for numerical data
 mstat024 Interpreting a bar graph
 mstat044 Interpreting a double bar graph
 mstat057 Interpreting a pictograph table
 mstat031 Interpreting a stem-and-leaf plot
 geom814 Angle measure in a circle graph
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat003 Mode of a data set
 mstat055 Finding the mode and range of a data set
 mstat092 Finding the mode and range from a line plot
 mstat001 Mean of a data set
 mstat077 Using a model to find the mean
 mstat075 Understanding the mean graphically: Two bars
 mstat076 Understanding the mean graphically: Four or more bars
 mstat091 Finding the mean of a symmetric distribution
 mstat079 Finding sample size and comparing samples for estimating the mean
 mstat089 Computations involving the mean, sample size, and sum of a data set
 stat803 Finding the value for a new score that will yield a given mean
 stat802 Rejecting unreasonable claims based on average statistics

mstat066 Weighted mean
 mstat028 Mean and median of a data set
 mstat029 How changing a value affects the mean and median
 mstat095 Finding outliers in a data set
 mstat053 Choosing the best measure to describe data
 mstat078 Comparing measures of center and variation
 mstat027 Using back-to-back stem-and-leaf plots to compare data sets
 mstat072 Five-number summary and interquartile range
 mstat006 Constructing a box-and-whisker plot
 mstat073 Using box-and-whisker plots to compare data sets
 mstat090 Comparing sample means
 mstat082 Computing mean absolute deviation from a list of numerical values
 mstat083 Computing mean absolute deviation from a bar graph
 mstat084 Assessing the degree of overlap of two distributions
 mstat043 Interpreting a Venn diagram of 3 sets
 mstat041 Interpreting a tree diagram
 mstat040 Introduction to the counting principle
 mstat015 Counting principle
 mstat099 Determining a sample space and outcomes for a simple event
 mstat100 Determining a sample space and outcomes for a compound event
 pcalc082 Factorial expressions
 mstat017 Computing permutations and combinations
 mstat008 Word problem involving permutations
 mstat009 Word problem involving combinations
 mstat054 Classifying likelihood
 mstat026 Introduction to the probability of an event
 mstat010 Probability of an event
 mstat039 Understanding likelihood
 mstat048 Odds of an event
 stat106 Outcomes and event probability
 stat112 Probabilities involving two dice
 mstat011 Area as probability
 mstat046 Experimental and theoretical probability
 mstat047 Introduction to expectation
 mstat012 Probability of independent events
 mstat013 Probability of dependent events
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event

B.99 Accelerated CC Algebra 1

Arithmetic Readiness

arith067 Simplifying a fraction
 arith212 Equivalent fractions
 arith711 Division involving zero
 arith070 Least common multiple of 2 numbers
 arith804 Least common multiple of 3 numbers
 arith418 Word problem involving the least common multiple of 2 numbers
 arith240 Word problem with common multiples
 arith801 Finding the LCD of two fractions
 arith664 Introduction to addition or subtraction of fractions with different denominators
 arith230 Addition or subtraction of fractions with different denominators
 arith803 Addition and subtraction of 3 fractions with different denominators
 arith805 Word problem involving addition or subtraction of fractions with different denominators
 arith100 Fractional part of a circle
 arith079 Product of a unit fraction and a whole number
 arith086 Product of a fraction and a whole number: Problem type 1

arith119 Introduction to fraction multiplication
arith053 Fraction multiplication
arith812 Product of a fraction and a whole number: Problem type 2
arith905 Determining if a quantity is increased or decreased when multiplied by a fraction
arith813 Multiplication of 3 fractions
arith818 Word problem involving fractions and multiplication
arith095 Multi-step word problem involving fractions and multiplication
arith088 The reciprocal of a number
arith694 Division involving a whole number and a fraction
arith022 Fraction division
arith695 Complex fraction without variables: Problem type 1
arith819 Word problem involving fractions and division
arith015 Writing an improper fraction as a mixed number
arith619 Writing a mixed number as an improper fraction
arith084 Addition of mixed numbers with the same denominator and carry
arith216 Subtraction of mixed numbers with the same denominator and borrowing
arith806 Addition or subtraction of mixed numbers with different denominators and no carry or borrow
arith808 Addition of mixed numbers with different denominators and carry
arith809 Subtraction of mixed numbers with different denominators and borrowing
arith807 Addition and subtraction of 3 mixed numbers with different denominators
arith810 Word problem involving addition or subtraction of mixed numbers with different denominators
arith815 Mixed number multiplication
arith816 Multiplication of a mixed number and a whole number
arith817 Division with a mixed number and a whole number
arith068 Mixed number division
arith820 Word problem involving multiplication or division with mixed numbers
arith110 Decimal place value: Tenths and hundredths
arith078 Rounding to tens or hundreds
arith123 Rounding to hundreds or thousands
arith221 Rounding decimals
arith687 Fractional position on a number line
arith092 Using a common denominator to order fractions
arith829 Reading decimal position on a number line: Tenths
arith830 Reading decimal position on a number line: Hundredths
arith129 Introduction to ordering decimals
arith608 Ordering decimals
arith733 Using a calculator to convert a fraction to a rounded decimal
arith087 Converting a decimal to a proper fraction in simplest form: Advanced
arith724 Converting a decimal to a mixed number and an improper fraction in simplest form: Advanced
arith609 Ordering fractions and decimals
arith624 Addition of aligned decimals
arith013 Decimal addition with 3 numbers
arith735 Decimal subtraction: Basic
arith736 Decimal subtraction: Advanced
arith737 Decimal addition and subtraction with 3 or more numbers
arith101 Estimating a sum of whole numbers
arith131 Estimating a decimal sum or difference
arith133 Word problem with addition of 3 or 4 decimals and whole numbers
arith134 Word problem with subtraction of a whole number and a decimal: Regrouping with zeros
arith017 Multiplication of a decimal by a whole number
arith055 Decimal multiplication: Problem type 1
arith082 Multiplication of a decimal by a power of ten
arith752 Estimating a product of decimals
arith135 Word problem with multiplication of a decimal and a whole number
arith137 Word problem with multiplication of two decimals
arith628 Word problem with multiple decimal operations: Problem type 1
arith081 Division of a decimal by a whole number
arith743 Division of a decimal by a 1-digit decimal
arith019 Division of a decimal by a 2-digit decimal
arith083 Division of a decimal by a power of ten
arith138 Word problem with division of two decimals
arith727 Converting a fraction to a terminating decimal: Basic

arith728 Converting a fraction to a terminating decimal: Advanced
 arith730 Converting a fraction to a repeating decimal: Basic
 arith731 Converting a fraction to a repeating decimal: Advanced
 arith823 Writing ratios using different notations
 arith663 Writing ratios for real-world situations
 arith450 Identifying statements that describe a ratio
 arith824 Simplifying a ratio of whole numbers: Problem type 1
 arith825 Simplifying a ratio of decimals
 arith827 Finding a unit price
 arith455 Using tables to compare ratios
 arith828 Computing unit prices to find the better buy
 arith228 Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 arith064 Solving a word problem on proportions using a unit rate
 arith452 Finding missing values in a table of equivalent ratios
 arith453 Using a table of equivalent ratios to find a missing quantity in a ratio
 arith834 Converting between percentages and decimals
 arith090 Converting a percentage to a fraction in simplest form
 arith839 Converting a decimal percentage to a fraction
 arith002 Converting a fraction to a percentage: Denominator of 20, 25, or 50
 arith843 Using a calculator to convert a fraction to a rounded percentage
 arith840 Finding a percentage of a whole number
 arith030 Finding a percentage of a whole number without a calculator: Basic
 arith844 Finding a percentage of a whole number without a calculator: Advanced
 arith845 Finding a percentage of a total amount: Real-world situations
 arith846 Finding a percentage of a total amount without a calculator: Sales tax, commission, discount
 arith857 Estimating a tip without a calculator
 arith686 Writing a ratio as a percentage
 arith069 Writing a ratio as a percentage without a calculator
 arith850 Finding the rate of a tax or commission
 unit005 U.S. Customary unit conversion with whole number values
 unit001 Metric distance conversion with whole number values
 unit012 Time unit conversion with whole number values
 arith826 Simplifying a ratio of whole numbers: Problem type 2
 unit034 Converting between metric and U.S. Customary unit systems

Real Numbers

alge286 Plotting integers on a number line
 arith691 Ordering integers
 arith415 Using a number line to compare integers
 mstat038 Reading the temperature from a thermometer
 arith699 Writing a signed number for a real-world situation
 arith400 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 1
 arith511 Interpreting a table of signed numbers that relate to a real-world situation: Problem type 2
 arith416 Comparing signed numbers relating to a real-world situation
 arith402 Plotting opposite integers on a number line
 arith403 Finding opposites of integers
 arith667 Plotting fractions on a number line
 arith605 Plotting rational numbers on a number line
 arith016 Square root of a perfect square
 arith763 Using a calculator to approximate a square root
 arith515 Approximating the location of irrational numbers on a number line
 arith712 Ordering real numbers
 arith071 Absolute value of a number
 arith412 Finding all numbers with a given absolute value
 arith200 Integer addition: Problem type 1
 arith108 Integer addition: Problem type 2
 arith430 Identifying relative change when combining two quantities
 arith688 Integer subtraction: Problem type 1
 arith689 Integer subtraction: Problem type 2

arith690 Integer subtraction: Problem type 3
arith754 Addition and subtraction with 3 integers
arith755 Addition and subtraction with 4 or 5 integers
arith701 Word problem with addition or subtraction of integers
arith231 Integer multiplication and division
arith800 Multiplication of 3 or 4 integers
arith952 Word problem with multiplication or division of integers
alge660 Identifying equivalent signed fractions
arith116 Signed fraction addition or subtraction: Basic
arith864 Signed fraction subtraction involving double negation
arith106 Signed fraction addition or subtraction: Advanced
arith811 Addition and subtraction of 3 fractions involving signs
arith822 Signed fraction multiplication: Basic
arith105 Signed fraction multiplication: Advanced
arith814 Signed fraction division
arith117 Signed decimal addition and subtraction
arith234 Signed decimal addition and subtraction with 3 numbers
arith750 Signed decimal multiplication
arith751 Signed decimal division
arith440 Operations with absolute value: Problem type 1
arith104 Operations with absolute value: Problem type 2
alge694 Computing the distance between two integers on a number line
arith692 Writing expressions using exponents
arith233 Introduction to exponents
arith683 Power of 10: Positive exponent
arith048 Order of operations with whole numbers
arith051 Order of operations with whole numbers and grouping symbols
arith693 Order of operations with whole numbers and exponents: Basic
arith713 Order of operations with whole numbers and exponents: Advanced
arith821 Exponents and fractions
arith859 Order of operations with fractions: Problem type 1
arith860 Order of operations with fractions: Problem type 2
arith861 Order of operations with fractions: Problem type 3
arith753 Squaring decimal bases: Products greater than 0.1
arith741 Exponents and decimals: Products less than 0.1
arith720 Order of operations with decimals: Problem type 1
arith746 Order of operations with decimals: Problem type 2
arith747 Order of operations with decimals: Problem type 3
arith702 Exponents and integers: Problem type 1
arith703 Exponents and integers: Problem type 2
arith704 Exponents and signed fractions
arith118 Order of operations with integers
arith600 Order of operations with integers and exponents
alge284 Evaluating an algebraic expression: Whole number addition or subtraction
alge683 Evaluating an algebraic expression: Whole number multiplication or division
alge285 Evaluating an algebraic expression: Whole numbers with two operations
alge649 Evaluating a formula
alge648 Evaluating an algebraic expression: Whole numbers with one operation and an exponent
alge832 Evaluating an algebraic expression: Whole number operations and exponents
alge005 Evaluating a linear expression: Integer multiplication with addition or subtraction
alge004 Evaluating a quadratic expression: Integers
mstat065 Converting between temperatures in Fahrenheit and Celsius
alge808 Evaluating a linear expression: Signed fraction multiplication with addition or subtraction
alge302 Evaluating a linear expression: Signed decimal addition and subtraction
alge303 Evaluating a linear expression: Signed decimal multiplication with addition or subtraction
alge001 Identifying numbers as integers or non-integers
arith513 Identifying rational decimal numbers
arith432 Identifying true statements about rational and irrational numbers
alge002 Identifying numbers as rational or irrational
alge700 Combining like terms: Whole number coefficients
alge432 Introduction to adding fractions with variables and common denominators
alge607 Combining like terms: Integer coefficients

alge187 Properties of addition
alge666 Combining like terms: Fractional coefficients
alge665 Combining like terms: Decimal coefficients
arith409 Introduction to the distributive property
arith657 Understanding the distributive property
alge310 Multiplying a constant and a linear monomial
alge606 Distributive property: Whole number coefficients
alge604 Distributive property: Integer coefficients
alge610 Distributive property: Fractional coefficients
arith056 Factors
arith034 Prime numbers
arith035 Prime factorization
arith033 Greatest common factor of 2 numbers
arith516 Greatest common factor of 3 numbers
alge605 Factoring a linear binomial
alge612 Identifying parts in an algebraic expression
alge613 Identifying equivalent algebraic expressions
alge188 Properties of real numbers
alge608 Using distribution and combining like terms to simplify: Univariate
alge667 Identifying properties used to simplify an algebraic expression
alge609 Using distribution with double negation and combining like terms to simplify: Multivariate
alge293 Combining like terms in a quadratic expression
alge650 Identifying solutions to a one-step linear equation: Problem type 1
alge651 Identifying solutions to a one-step linear equation: Problem type 2
alge009 Additive property of equality with whole numbers
alge801 Additive property of equality with fractions and mixed numbers
alge800 Additive property of equality with decimals
alge010 Additive property of equality with integers
alge836 Additive property of equality with signed fractions
alge008 Multiplicative property of equality with whole numbers
alge646 Multiplicative property of equality with whole numbers: Fractional answers
alge820 Multiplicative property of equality with fractions
alge825 Multiplicative property of equality with decimals
alge797 Multiplicative property of equality with integers
alge012 Multiplicative property of equality with signed fractions
geom300 Perimeter of a square or a rectangle
geom221 Finding the missing length in a figure
alge615 Writing algebraic expressions for the perimeter of a figure
geom019 Area of a square or a rectangle
geom340 Area of a piecewise rectangular figure
geom562 Area between two rectangles
alge616 Writing algebraic expressions for the area of a figure
geom410 Word problem involving the area of a square or a rectangle
geom142 Word problem involving the area between two rectangles
geom022 Area of a parallelogram
geom801 Area of a triangle
geom023 Area of a trapezoid
geom016 Circumference of a circle
geom301 Perimeter involving rectangles and circles
geom026 Area of a circle
geom802 Circumference and area of a circle
geom477 Circumference and area of a circle: Exact answers in terms of pi
geom302 Area involving rectangles and circles
geom563 Area between two concentric circles
geom036 Word problem involving the area between two concentric circles
geom214 Area involving inscribed figures
geom311 Volume of a rectangular prism
geom571 Word problem involving the volume of a rectangular prism
geom558 Word problem involving the rate of filling or emptying a rectangular prism
geom090 Volume of a triangular prism
geom035 Volume of a cylinder
geom573 Word problem involving the volume of a cylinder

geom092 Word problem involving the rate of filling or emptying a cylinder
 geom033 Volume of a pyramid
 geom622 Volume of a cone
 geom086 Volume of a cone: Exact answers in terms of π
 geom841 Volume of a sphere
 geom031 Surface area of a cube or a rectangular prism
 geom091 Surface area of a triangular prism
 geom621 Surface area of a cylinder
 geom034 Surface area of a cylinder: Exact answers in terms of π
 geom842 Surface area of a sphere

Linear Equations

alge834 Identifying solutions to a linear equation in one variable: Two-step equations
 alge803 Using two steps to solve an equation with whole numbers
 alge266 Additive property of equality with a negative coefficient
 alge006 Solving a two-step equation with integers
 alge815 Introduction to using substitution to solve a linear equation
 alge200 Solving an equation to find the value of an expression
 alge920 Introduction to solving an equation with parentheses
 alge837 Solving a multi-step equation given in fractional form
 alge986 Identifying properties used to solve a linear equation
 alge824 Solving a two-step equation with signed decimals
 alge838 Introduction to solving an equation with variables on the same side
 alge862 Solving a linear equation with several occurrences of the variable: Variables on the same side
 alge611 Introduction to solving a linear equation with a variable on each side
 alge863 Solving a linear equation with several occurrences of the variable: Variables on both sides
 alge011 Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 alge013 Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 alge209 Solving a linear equation with several occurrences of the variable: Variables on both sides and two distributions
 alge614 Clearing fractions in an equation
 alge420 Solving a linear equation with several occurrences of the variable: Fractional forms with monomial numerators
 alge208 Solving a two-step equation with signed fractions
 alge061 Solving a linear equation with several occurrences of the variable: Variables on both sides and fractional coefficients
 alge179 Solving a linear equation with several occurrences of the variable: Fractional forms with binomial numerators
 alge742 Solving equations with zero, one, or infinitely many solutions
 alge511 Solving for a variable in terms of other variables using addition or subtraction: Basic
 alge512 Solving for a variable in terms of other variables using addition or subtraction: Advanced
 alge513 Solving for a variable in terms of other variables using multiplication or division: Basic
 alge514 Solving for a variable in terms of other variables using multiplication or division: Advanced
 alge517 Solving for a variable in terms of other variables using addition or subtraction with division
 alge518 Solving for a variable inside parentheses in terms of other variables
 alge507 Solving for a variable in terms of other variables in a linear equation with fractions
 alge603 Introduction to solving an absolute value equation
 alge864 Solving an absolute value equation: Problem type 1
 alge865 Solving an absolute value equation: Problem type 2
 alge866 Solving an absolute value equation: Problem type 3
 alge867 Solving an absolute value equation: Problem type 4
 alge733 Writing a one-step expression for a real-world situation
 alge831 Translating a phrase into a one-step expression
 alge291 Translating a phrase into a two-step expression
 alge016 Translating a sentence into a one-step equation
 alge841 Translating a sentence into a multi-step equation
 arith504 Writing an equation to represent a proportional relationship

alge802 Solving a fraction word problem using a linear equation of the form $Ax = B$
 alge671 Choosing stories that can be represented by given one-step equations
 alge628 Writing an equation of the form $Ax + B = C$ to solve a word problem
 alge618 Comparing arithmetic and algebraic solutions to a word problem
 alge672 Choosing stories that can be represented by given two-step equations
 alge173 Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 alge629 Writing an equation of the form $A(x + B) = C$ to solve a word problem
 alge014 Solving a word problem with two unknowns using a linear equation
 alge673 Writing an equation to represent a real-world problem: Variable on both sides
 alge674 Writing and solving a real-world problem given an equation with the variable on both sides
 alge730 Writing a multi-step equation for a real-world situation
 alge219 Solving a decimal word problem using a linear equation with the variable on both sides
 alge704 Solving a fraction word problem using a linear equation with the variable on both sides
 alge792 Solving a word problem with three unknowns using a linear equation
 alge842 Solving a word problem involving consecutive integers
 alge794 Solving a value mixture problem using a linear equation
 alge218 Solving a word problem involving rates and time conversion
 alge823 Solving a one-step word problem using the formula $d = rt$
 alge796 Solving a distance, rate, time problem using a linear equation
 unit035 Converting between compound units: Basic
 unit036 Converting between compound units: Advanced
 arith514 Converting a repeating decimal to a fraction
 alge819 Solving a proportion of the form $x/a=b/c$: Basic
 alge272 Solving a proportion of the form $x/a = b/c$
 alge840 Solving a proportion of the form $(x+a)\div b = c\div d$
 alge271 Solving a proportion of the form $a/(x+b) = c/x$
 alge658 Introduction to solving a rational equation
 alge060 Solving a rational equation that simplifies to linear: Denominator x
 arith610 Word problem on proportions: Problem type 1
 arith611 Word problem on proportions: Problem type 2
 arith862 Applying the percent equation: Problem type 1
 arith863 Applying the percent equation: Problem type 2
 arith849 Finding the total amount given the percentage of a partial amount
 arith852 Finding the multiplier to give a final amount after a percentage increase or decrease
 arith851 Finding the final amount given the original amount and a percentage increase or decrease
 arith847 Finding the sale price given the original price and percent discount
 arith074 Finding the sale price without a calculator given the original price and percent discount
 arith848 Finding the total cost including tax or markup
 arith855 Finding the original amount given the result of a percentage increase or decrease
 arith031 Finding the original price given the sale price and percent discount
 arith858 Finding the percentage increase or decrease: Basic
 arith225 Finding the percentage increase or decrease: Advanced
 unit052 Finding the absolute error and percent error of a measurement
 arith854 Computing a percent mixture
 alge795 Solving a percent mixture problem using a linear equation
 arith232 Finding simple interest without a calculator
 arith853 Introduction to compound interest
 geom564 Finding side lengths of squares given an area and a perimeter
 geom648 Finding side lengths of rectangles given one dimension and an area or a perimeter
 geom444 Word problem on optimizing an area or perimeter
 geom561 Finding the dimensions of a rectangle given its perimeter and a relationship between sides
 geom143 Finding the perimeter or area of a rectangle given one of these values
 geom817 Finding a side length given the perimeter and side lengths with variables
 geom838 Circumference ratios
 geom039 Finding supplementary and complementary angles
 geom500 Solving equations involving vertical angles and linear pairs
 geom001 Finding an angle measure of a triangle given two angles
 geom628 Finding angle measures of a triangle given angles with variables
 geom037 Similar polygons
 geom038 Similar right triangles
 geom337 Indirect measurement
 geom538 Finding lengths using scale models

geom539 Finding a scale factor: Same units
 geom541 Using a scale drawing to find actual area
 geom542 Reproducing a scale drawing at a different scale

Linear Inequalities

alge015 Translating a sentence by using an inequality symbol
 alge845 Translating a sentence into a one-step inequality
 alge653 Introduction to identifying solutions to an inequality
 alge748 Writing an inequality for a real-world situation
 alge017 Graphing a linear inequality on the number line
 alge822 Writing an inequality given a graph on the number line
 alge186 Translating a sentence into a compound inequality
 alge166 Graphing a compound inequality on the number line
 alge847 Writing a compound inequality given a graph on the number line
 set001 Set builder notation
 set002 Union and intersection of finite sets
 alge652 Identifying solutions to a one-step linear inequality
 alge848 Additive property of inequality with whole numbers
 alge849 Additive property of inequality with integers
 alge852 Additive property of inequality with signed fractions
 alge853 Additive property of inequality with signed decimals
 alge809 Multiplicative property of inequality with whole numbers
 alge854 Multiplicative property of inequality with integers
 alge964 Multiplicative property of inequality with signed fractions
 alge844 Identifying solutions to a two-step linear inequality in one variable
 alge636 Solving a two-step linear inequality with whole numbers
 alge855 Solving a two-step linear inequality: Problem type 1
 alge856 Solving a two-step linear inequality: Problem type 2
 alge857 Solving a two-step linear inequality with a fractional coefficient
 alge977 Solving a linear inequality with multiple occurrences of the variable: Problem type 1
 alge858 Solving a linear inequality with multiple occurrences of the variable: Problem type 2
 alge859 Solving a linear inequality with multiple occurrences of the variable: Problem type 3
 alge860 Solving inequalities with no solution or all real numbers as solutions
 alge746 Solving a compound linear inequality: Graph solution, basic
 alge861 Solving a compound linear inequality: Graph solution, advanced
 alge621 Solving a word problem using a one-step linear inequality
 alge846 Translating a sentence into a multi-step inequality
 alge619 Solving a word problem using a two-step linear inequality and describing the solution
 alge623 Solving a word problem using a two-step linear inequality
 alge749 Solving a decimal word problem using a two-step linear inequality
 alge750 Solving a decimal word problem using a linear inequality with the variable on both sides
 alge868 Solving an absolute value inequality: Problem type 1
 alge943 Writing an absolute value inequality given a graph on the number line
 alge869 Solving an absolute value inequality: Problem type 2
 alge870 Solving an absolute value inequality: Problem type 3
 alge871 Solving an absolute value inequality: Problem type 4
 alge872 Solving an absolute value inequality: Problem type 5

Functions and Lines

alge064 Reading a point in the coordinate plane
 alge067 Plotting a point in the coordinate plane
 alge693 Plotting a point in the coordinate plane: Mixed number coordinates
 arith404 Naming the quadrant or axis of a point given its graph
 arith405 Naming the quadrant or axis of a point given its coordinates
 arith406 Naming the quadrant or axis of a point given the signs of its coordinates
 alge695 Finding distances between points that share a common coordinate given the graph

alge696 Finding distances between points that share a common coordinate given their coordinates
alge282 Function tables with two-step rules
alge850 Table for a linear equation
fun005 Writing a function rule given a table of ordered pairs: One-step rules
fun006 Writing a function rule given a table of ordered pairs: Two-step rules
alge873 Identifying solutions to a linear equation in two variables
alge066 Finding a solution to a linear equation in two variables
alge877 Graphing a linear equation of the form $y = mx$
alge878 Graphing a line given its equation in slope-intercept form: Integer slope
alge879 Graphing a line given its equation in slope-intercept form: Fractional slope
alge880 Graphing a line given its equation in standard form
alge198 Graphing a vertical or horizontal line
alge884 Finding x- and y-intercepts given the graph of a line on a grid
alge924 Finding x- and y-intercepts of a line given the equation: Basic
alge210 Finding x- and y-intercepts of a line given the equation: Advanced
alge197 Graphing a line given its x- and y-intercepts
alge881 Graphing a line by first finding its x- and y-intercepts
mstat007 Interpreting a line graph
alge575 Finding slope given the graph of a line in quadrant 1 that models a real-world situation
alge875 Classifying slopes given graphs of lines
alge886 Finding slope given the graph of a line on a grid
alge887 Finding slope given two points on the line
alge885 Finding the slope of horizontal and vertical lines
alge888 Finding the coordinate that yields a given slope
alge259 Graphing a line given its slope and y-intercept
alge196 Graphing a line through a given point with a given slope
alge625 Identifying linear equations: Basic
alge876 Identifying linear equations: Advanced
alge874 Identifying linear functions given ordered pairs
alge891 Rewriting a linear equation in the form $Ax + By = C$
alge889 Finding the slope and y-intercept of a line given its equation in the form $y = mx + b$
alge890 Finding the slope and y-intercept of a line given its equation in the form $Ax + By = C$
alge882 Graphing a line by first finding its slope and y-intercept
alge258 Writing an equation of a line given its slope and y-intercept
alge892 Writing an equation and graphing a line given its slope and y-intercept
alge314 Finding the slope, y-intercept, and equation for a linear function given a table of values
alge893 Writing an equation in slope-intercept form given the slope and a point
alge318 Finding the slope and a point on a line given its equation in point-slope form
alge883 Graphing a line given its equation in point-slope form
alge894 Writing an equation in point-slope form given the slope and a point
alge313 Writing an equation in standard form given the slope and a point
alge070 Writing an equation of a line given the y-intercept and another point
alge072 Writing the equation of the line through two given points
alge073 Writing the equations of vertical and horizontal lines through a given point
alge322 Comparing linear functions to the parent function $y=x$
geom806 Finding slopes of lines parallel and perpendicular to a line given in slope-intercept form
geom807 Finding slopes of lines parallel and perpendicular to a line given in the form $Ax + By = C$
alge895 Identifying parallel and perpendicular lines from equations
geom808 Writing equations of lines parallel and perpendicular to a given line through a point
geom462 Identifying parallel and perpendicular lines from coordinates
alge630 Finding outputs of a one-step function that models a real-world situation: Two variable equation
alge632 Finding outputs of a two-step function with decimals that models a real-world situation: Two variable equation
alge633 Finding inputs and outputs of a two-step function that models a real-world situation: Two variable equation
alge655 Writing and evaluating a function that models a real-world situation: Basic
alge897 Writing and evaluating a function that models a real-world situation: Advanced
alge656 Writing an equation and drawing its graph to model a real-world situation: Basic
alge701 Writing an equation and drawing its graph to model a real-world situation: Advanced
alge817 Finding the initial amount and rate of change given a table for a linear function
alge818 Finding the initial amount and rate of change given a graph of a linear function
alge992 Combining functions to write a new function that models a real-world situation

alge987 Comparing properties of linear functions given in different forms
 alge989 Interpreting the parameters of a linear function that models a real-world situation
 alge805 Application problem with a linear function: Finding a coordinate given the slope and a point
 alge806 Application problem with a linear function: Finding a coordinate given two points
 alge670 Identifying independent and dependent quantities from tables and graphs
 mstat052 Identifying independent and dependent variables from equations or real-world situations
 alge991 Solving a linear equation by graphing
 mstat094 Constructing a scatter plot
 mstat030 Sketching the line of best fit
 mstat023 Scatter plots and correlation
 mstat068 Predictions from the line of best fit
 mstat067 Approximating the equation of a line of best fit and making predictions
 mstat069 Computing residuals
 mstat070 Interpreting residual plots
 mstat093 Classifying linear and nonlinear relationships from scatter plots
 mstat071 Linear relationship and the correlation coefficient
 mstat096 Identifying outliers and clustering in scatter plots
 mstat074 Identifying correlation and causation
 alge982 Identifying direct variation equations
 alge938 Identifying direct variation from ordered pairs and writing equations
 alge904 Writing a direct variation equation
 alge175 Word problem on direct variation
 alge828 Interpreting direct variation from a graph
 fun032 Identifying functions from relations
 fun010 Vertical line test
 fun016 Domain and range from ordered pairs
 fun001 Table for a linear function
 pcalc760 Evaluating functions: Linear and quadratic or cubic
 fun033 Variable expressions as inputs of functions: Problem type 1
 fun030 Evaluating a piecewise-defined function
 alge294 Finding outputs of a one-step function that models a real-world situation: Function notation
 alge295 Finding outputs of a two-step function with decimals that models a real-world situation: Function notation
 alge296 Finding inputs and outputs of a two-step function that models a real-world situation: Function notation
 alge990 Domain and range of a linear function that models a real-world situation
 fun026 Finding an output of a function from its graph
 pcalc761 Finding inputs and outputs of a function from its graph
 fun007 Domain and range from the graph of a discrete relation
 alge312 Finding domain and range from a linear graph in context
 pcalc750 Finding intercepts of a nonlinear function given its graph
 alge999 Finding where a function is increasing, decreasing, or constant given the graph
 pcalc752 Finding local maxima and minima of a function given the graph
 mstat018 Choosing a graph to fit a narrative: Basic
 mstat051 Choosing a graph to fit a narrative: Advanced
 alge896 Graphing an integer function and finding its range for a given domain
 alge570 Graphing a function of the form $f(x) = ax + b$: Integer slope
 alge571 Graphing a function of the form $f(x) = ax + b$: Fractional slope
 alge913 Graphing an absolute value equation of the form $y = A - |x - h| + k$
 alge900 Graphing an absolute value equation in the plane: Basic
 alge168 Graphing an absolute value equation in the plane: Advanced
 alge954 Graphing a parabola of the form $y = ax^2$
 alge955 Graphing a parabola of the form $y = ax^2 + c$
 alge572 Graphing a function of the form $f(x) = ax^2$
 alge573 Graphing a function of the form $f(x) = ax^2 + c$
 alge253 Graphing a parabola of the form $y = (x-h)^2 + k$
 alge262 Graphing a cubic function of the form $y = ax^3$
 fun031 Graphing a piecewise-defined function: Problem type 1
 alge997 Finding the average rate of change of a function given its equation
 alge998 Finding the average rate of change of a function given its graph
 alge953 Translating the graph of a parabola: One step
 alge723 How the leading coefficient affects the shape of a parabola
 alge898 Translating the graph of an absolute value function: One step

alge899 Translating the graph of an absolute value function: Two steps
 alge901 How the leading coefficient affects the graph of an absolute value function
 alge185 Writing an equation for a function after a vertical translation
 pcalc769 Translating the graph of a function: One step
 pcalc770 Translating the graph of a function: Two steps
 pcalc771 Transforming the graph of a function by reflecting over an axis
 pcalc772 Transforming the graph of a function by shrinking or stretching
 pcalc773 Transforming the graph of a function using more than one transformation
 fun020 Writing an equation for a function after a vertical and horizontal translation
 alge644 Finding the first terms of an arithmetic sequence using an explicit rule
 alge925 Finding the next terms of an arithmetic sequence with whole numbers
 alge906 Finding the next terms of an arithmetic sequence with integers
 alge908 Finding the first terms of a sequence using a recursive rule
 alge979 Identifying arithmetic sequences and finding the common difference
 alge931 Finding a specified term of an arithmetic sequence given the first terms
 pcalc085 Finding a specified term of an arithmetic sequence given the common difference and first term
 alge909 Writing an explicit rule for an arithmetic sequence
 alge910 Writing a recursive rule for an arithmetic sequence

Linear Systems

alge914 Identifying solutions to a system of linear equations
 alge075 Classifying systems of linear equations from graphs
 alge725 Graphically solving a system of linear equations
 pcalc820 Using a graphing calculator to solve a system of linear equations: Basic
 pcalc821 Using a graphing calculator to solve a system of linear equations: Advanced
 alge317 Writing a system of linear equations given its graph
 alge816 Solving a system of linear equations of the form $y = mx + b$
 alge751 Solving a system of linear equations using substitution
 alge915 Solving a system of linear equations using elimination with addition
 alge076 Solving a system of linear equations using elimination with multiplication and addition
 alge916 Solving a system of linear equations with fractional coefficients
 alge917 Solving a system of linear equations with decimal coefficients
 alge634 Solving systems of linear equations with 0, 1, or infinitely many solutions
 alge988 Identifying the operations used to create equivalent systems of equations
 alge753 Solving a 3x3 system of linear equations: Problem type 1
 pcalc037 Scalar multiplication of a matrix
 pcalc038 Addition or subtraction of matrices
 pcalc740 Linear combination of matrices
 pcalc712 Gauss-Jordan elimination with a 2x2 matrix
 alge263 Interpreting the graphs of two functions
 alge078 Solving a word problem involving a sum and another basic relationship using a system of linear equations
 alge919 Solving a word problem using a system of linear equations of the form $Ax + By = C$
 alge918 Solving a word problem using a system of linear equations of the form $y = mx + b$
 alge184 Solving a value mixture problem using a system of linear equations
 alge192 Solving a percent mixture problem using a system of linear equations
 alge224 Solving a distance, rate, time problem using a system of linear equations
 alge172 Solving a tax rate or interest rate problem using a system of linear equations
 alge793 Solving a word problem using a 3x3 system of linear equations: Problem type 1
 alge912 Identifying solutions to a linear inequality in two variables
 alge225 Graphing a linear inequality in the plane: Vertical or horizontal line
 alge720 Graphing a linear inequality in the plane: Slope-intercept form
 alge018 Graphing a linear inequality in the plane: Standard form
 alge315 Writing an inequality given its graph in the plane: Horizontal or vertical boundary line
 alge316 Writing an inequality given its graph in the plane: Slanted boundary line
 alge079 Graphing a system of two linear inequalities: Basic
 alge921 Graphing a system of two linear inequalities: Advanced
 alge922 Graphing a system of three linear inequalities
 alge729 Writing a multi-step inequality for a real-world situation
 pcalc093 Solving a word problem using a system of linear inequalities: Problem type 1

Exponents and Exponential Functions

alge821 Understanding the product rule of exponents
 alge024 Introduction to the product rule of exponents
 alge311 Product rule with positive exponents: Univariate
 alge030 Product rule with positive exponents: Multivariate
 arith029 Ordering numbers with positive exponents
 alge826 Understanding the power rules of exponents
 alge306 Introduction to the power of a power rule of exponents
 alge305 Introduction to the power of a product rule of exponents
 alge307 Power rules with positive exponents: Multivariate products
 alge308 Power rules with positive exponents: Multivariate quotients
 alge756 Power and product rules with positive exponents
 alge451 Simplifying a ratio of multivariate monomials: Basic
 alge827 Introduction to the quotient rule of exponents
 alge452 Simplifying a ratio of univariate monomials
 alge026 Quotient of expressions involving exponents
 alge453 Simplifying a ratio of multivariate monomials: Advanced
 alge927 Power and quotient rules with positive exponents
 alge790 Evaluating expressions with exponents of zero
 arith684 Power of 10: Negative exponent
 arith729 Evaluating an expression with a negative exponent: Whole number base
 arith042 Evaluating an expression with a negative exponent: Positive fraction base
 arith043 Evaluating an expression with a negative exponent: Negative integer base
 arith024 Ordering numbers with negative exponents
 alge791 Rewriting an algebraic expression without a negative exponent
 alge961 Introduction to the product rule with negative exponents
 alge028 Product rule with negative exponents
 alge755 Quotient rule with negative exponents: Problem type 1
 alge926 Quotient rule with negative exponents: Problem type 2
 alge025 Power of a power rule with negative exponents
 alge799 Power rules with negative exponents
 alge928 Power and quotient rules with negative exponents: Problem type 1
 alge929 Power and quotient rules with negative exponents: Problem type 2
 alge757 Power, product, and quotient rules with negative exponents
 scinot023 Introduction to scientific notation with positive exponents
 arith036 Scientific notation with positive exponent
 scinot024 Introduction to scientific notation with negative exponents
 arith037 Scientific notation with negative exponent
 scinot012 Converting between scientific notation and standard form in a real-world situation
 scinot021 Expressing calculator notation as scientific notation
 scinot008 Multiplying numbers written in scientific notation: Basic
 scinot009 Multiplying numbers written in scientific notation: Advanced
 scinot019 Multiplying numbers written in decimal form or scientific notation in a real-world situation
 scinot010 Dividing numbers written in scientific notation: Basic
 scinot011 Dividing numbers written in scientific notation: Advanced
 scinot013 Finding the scale factor between numbers given in scientific notation in a real-world situation
 alge971 Table for an exponential function
 alge969 Graphing an exponential function: $f(x) = ax$
 alge970 Graphing an exponential function: $f(x) = a(b)x$
 alge712 Graphing an exponential function and its asymptote: $f(x) = a(b)x$
 alge321 Finding domain and range from the graph of an exponential function
 pcalc922 Translating the graph of an exponential function
 alge830 Evaluating an exponential function that models a real-world situation
 alge301 Solving an exponential equation by finding common bases: Linear exponents
 alge177 Finding a final amount in a word problem on exponential growth or decay
 alge741 Finding the final amount in a word problem on compound interest
 alge966 Finding the initial amount and rate of change given an exponential function
 alge968 Writing an equation that models exponential growth or decay
 alge967 Writing an exponential function rule given a table of ordered pairs
 mstat103 Choosing an exponential model and using it to make a prediction
 alge993 Comparing linear, polynomial, and exponential functions

alge645 Finding the first terms of a geometric sequence using an explicit rule
 alge933 Finding the next terms of a geometric sequence with whole numbers
 alge907 Finding the next terms of a geometric sequence with signed numbers
 alge981 Identifying arithmetic and geometric sequences
 alge980 Identifying geometric sequences and finding the common ratio
 alge934 Finding a specified term of a geometric sequence given the first terms
 pcalc086 Finding a specified term of a geometric sequence given the common ratio and first term
 pcalc713 Arithmetic and geometric sequences: Identifying and writing an explicit rule
 alge911 Writing recursive rules for arithmetic and geometric sequences
 alge965 Identifying linear, quadratic, and exponential functions given ordered pairs

Polynomials and Factoring

alge758 Degree and leading coefficient of a univariate polynomial
 alge031 Degree of a multivariate polynomial
 alge798 Simplifying a sum or difference of two univariate polynomials
 alge029 Simplifying a sum or difference of three univariate polynomials
 alge932 Simplifying a sum or difference of multivariate polynomials
 alge735 Multiplying a univariate polynomial by a monomial with a positive coefficient
 alge972 Multiplying a univariate polynomial by a monomial with a negative coefficient
 alge835 Multiplying a multivariate polynomial by a monomial
 alge033 Multiplying binomials with leading coefficients of 1
 alge983 Multiplying binomials with leading coefficients greater than 1
 alge765 Multiplying binomials in two variables
 alge764 Multiplying conjugate binomials: Univariate
 alge081 Multiplying conjugate binomials: Multivariate
 alge032 Squaring a binomial: Univariate
 alge068 Squaring a binomial: Multivariate
 alge973 Multiplying binomials with negative coefficients
 alge935 Multiplication involving binomials and trinomials in one variable
 alge180 Multiplication involving binomials and trinomials in two variables
 alge759 Dividing a polynomial by a monomial: Univariate
 alge760 Dividing a polynomial by a monomial: Multivariate
 alge761 Polynomial long division: Problem type 1
 alge762 Polynomial long division: Problem type 2
 alge763 Polynomial long division: Problem type 3
 alge985 Closure properties of integers and polynomials
 alge736 Introduction to the GCF of two monomials
 alge930 Greatest common factor of three univariate monomials
 alge037 Greatest common factor of two multivariate monomials
 alge738 Factoring out a monomial from a polynomial: Univariate
 alge739 Factoring out a monomial from a polynomial: Multivariate
 alge949 Factoring out a binomial from a polynomial: GCF factoring, basic
 alge923 Factoring a univariate polynomial by grouping: Problem type 1
 alge950 Factoring a univariate polynomial by grouping: Problem type 2
 alge951 Factoring a multivariate polynomial by grouping: Problem type 1
 alge952 Factoring a multivariate polynomial by grouping: Problem type 2
 alge039 Factoring a quadratic with leading coefficient 1
 alge942 Factoring a quadratic in two variables with leading coefficient 1
 alge936 Factoring out a constant before factoring a quadratic
 alge939 Factoring a quadratic with leading coefficient greater than 1: Problem type 1
 alge940 Factoring a quadratic with leading coefficient greater than 1: Problem type 2
 alge941 Factoring a quadratic with leading coefficient greater than 1: Problem type 3
 alge978 Factoring a quadratic by the ac-method
 alge265 Factoring a quadratic in two variables with leading coefficient greater than 1
 alge937 Factoring a quadratic with a negative leading coefficient
 alge944 Factoring a perfect square trinomial with leading coefficient 1
 alge945 Factoring a perfect square trinomial with leading coefficient greater than 1
 alge946 Factoring a perfect square trinomial in two variables
 alge290 Factoring a difference of squares in one variable: Basic

alge947 Factoring a difference of squares in one variable: Advanced
 alge839 Factoring a difference of squares in two variables
 alge948 Factoring a polynomial involving a GCF and a difference of squares: Univariate
 alge833 Factoring a polynomial involving a GCF and a difference of squares: Multivariate
 alge041 Factoring a product of a quadratic trinomial and a monomial
 alge042 Factoring with repeated use of the difference of squares formula
 alge044 Factoring a sum or difference of two cubes

Quadratic Functions and Equations

alge681 Solving an equation written in factored form
 alge956 Finding the roots of a quadratic equation of the form $ax^2 + bx = 0$
 alge045 Finding the roots of a quadratic equation with leading coefficient 1
 alge048 Finding the roots of a quadratic equation with leading coefficient greater than 1
 alge211 Solving a quadratic equation needing simplification
 alge323 Finding the zeros of a quadratic function given its equation
 alge163 Writing a quadratic equation given the roots and the leading coefficient
 alge703 Solving a word problem using a quadratic equation with rational roots
 arith601 Square root of a rational perfect square
 arith760 Square roots of perfect squares with signs
 arith093 Simplifying the square root of a whole number less than 100
 arith762 Simplifying the square root of a whole number greater than 100
 alge962 Solving an equation of the form $x^2 = a$ using the square root property
 alge958 Solving a quadratic equation using the square root property: Decimal answers, basic
 alge959 Solving a quadratic equation using the square root property: Decimal answers, advanced
 alge092 Solving a quadratic equation using the square root property: Exact answers, basic
 alge227 Solving a quadratic equation using the square root property: Exact answers, advanced
 alge094 Completing the square
 alge960 Solving a quadratic equation by completing the square: Decimal answers
 alge780 Solving a quadratic equation by completing the square: Exact answers
 alge095 Applying the quadratic formula: Exact answers
 alge963 Applying the quadratic formula: Decimal answers
 alge214 Discriminant of a quadratic equation
 alge524 Solving a word problem using a quadratic equation with irrational roots
 alge974 Finding the vertex, x-intercepts, and axis of symmetry from the graph of a parabola
 alge569 Graphing a parabola of the form $y = x^2 + bx + c$
 pcalc746 Graphing a parabola of the form $y = ax^2 + bx + c$: Integer coefficients
 pcalc747 Graphing a parabola of the form $y = ax^2 + bx + c$: Rational coefficients
 alge320 Writing a quadratic function given its zeros
 alge277 Finding the x-intercept(s) and the vertex of a parabola
 pcalc714 Using a graphing calculator to find the zeros of a quadratic function
 pcalc793 Using a graphing calculator to find the x-intercept(s) and vertex of a quadratic function
 alge319 Rewriting a quadratic function in standard form
 pcalc774 Rewriting a quadratic function to find the vertex of its graph
 pcalc775 Finding the maximum or minimum of a quadratic function
 alge785 Word problem involving the maximum or minimum of a quadratic function
 alge975 Domain and range from the graph of a parabola
 alge976 Range of a quadratic function
 pcalc680 Writing the equation of a quadratic function given its graph
 alge957 Solving a quadratic equation by graphing
 alge996 Comparing properties of quadratic functions given in different forms
 alge702 Classifying the graph of a function
 mstat102 Choosing a quadratic model and using it to make a prediction
 pcalc748 Graphing a quadratic inequality: Problem type 1
 pcalc749 Graphing a quadratic inequality: Problem type 2
 alge994 Graphically solving a system of linear and quadratic equations
 alge995 Solving a system of linear and quadratic equations
 pcalc716 Using a graphing calculator to solve a system of linear and quadratic equations: Basic
 fun019 Sum, difference, and product of two functions
 alge716 Introduction to the composition of two functions

fun022 Composition of two functions: Basic
fun011 Horizontal line test
fun012 Inverse functions: Linear, discrete
pcalc114 Even and odd functions: Problem type 1

Radicals

alge413 Finding all square roots of a number
arith602 Estimating a square root
arith761 Square roots of integers raised to even exponents
alge415 Introduction to simplifying a radical expression with an even exponent
alge264 Square root of a perfect square monomial
alge537 Using absolute value to simplify square roots of perfect square monomials
arith094 Cube root of an integer
alge549 Finding n th roots of perfect n th powers with signs
arith768 Finding the n th root of a perfect n th power fraction
alge550 Finding the n th root of a perfect n th power monomial
alge539 Table for a square root function
alge565 Domain of a square root function: Basic
alge566 Domain of a square root function: Advanced
alge543 Graphing a square root function: Problem type 1
alge544 Graphing a square root function: Problem type 2
alge545 Graphing a square root function: Problem type 3
alge812 Converting between radical form and exponent form
alge560 Rational exponents: Unit fraction exponents and whole number bases
alge561 Rational exponents: Unit fraction exponents and bases involving signs
alge250 Rational exponents: Non-unit fraction exponent with a whole number base
alge251 Rational exponents: Negative exponents and fractional bases
alge558 Rational exponents: Product rule
alge559 Rational exponents: Quotient rule
alge773 Rational exponents: Products and quotients with negative exponents
alge562 Rational exponents: Power of a power rule
alge249 Rational exponents: Powers of powers with negative exponents
alge080 Simplifying a radical expression with an even exponent
alge520 Introduction to simplifying a radical expression with an odd exponent
alge521 Simplifying a radical expression with an odd exponent
alge275 Simplifying a radical expression with two variables
alge273 Simplifying a higher root of a whole number
alge551 Introduction to simplifying a higher radical expression
alge552 Simplifying a higher radical expression: Univariate
alge811 Simplifying a higher radical expression: Multivariate
arith767 Introduction to square root addition or subtraction
arith032 Square root addition or subtraction
alge533 Square root addition or subtraction with three terms
alge531 Introduction to simplifying a sum or difference of radical expressions: Univariate
alge532 Simplifying a sum or difference of radical expressions: Univariate
alge084 Simplifying a sum or difference of radical expressions: Multivariate
arith764 Introduction to square root multiplication
arith765 Square root multiplication: Basic
arith039 Square root multiplication: Advanced
alge522 Introduction to simplifying a product of radical expressions: Univariate
alge523 Simplifying a product of radical expressions: Univariate
alge640 Simplifying a product of radical expressions: Multivariate
alge556 Introduction to simplifying a product of higher roots
alge557 Simplifying a product of higher radical expressions
alge525 Introduction to simplifying a product involving square roots using the distributive property
alge526 Simplifying a product involving square roots using the distributive property: Basic
alge276 Simplifying a product involving square roots using the distributive property: Advanced
alge774 Special products of radical expressions: Conjugates and squaring
alge984 Classifying sums and products as rational or irrational

arith766 Simplifying a quotient of square roots
 alge530 Simplifying a quotient involving a sum or difference with a square root
 alge527 Rationalizing a denominator: Quotient involving square roots
 alge528 Rationalizing a denominator: Square root of a fraction
 alge529 Rationalizing a denominator: Quotient involving a monomial
 alge534 Rationalizing a denominator using conjugates: Integer numerator
 alge535 Rationalizing a denominator using conjugates: Square root in numerator
 alge400 Introduction to solving a radical equation
 alge089 Solving a radical equation that simplifies to a linear equation: One radical, basic
 alge402 Solving a radical equation that simplifies to a linear equation: One radical, advanced
 alge090 Solving a radical equation that simplifies to a linear equation: Two radicals
 alge403 Solving a radical equation that simplifies to a quadratic equation: One radical, basic
 alge404 Solving a radical equation that simplifies to a quadratic equation: One radical, advanced
 alge411 Solving a radical equation with a quadratic expression under the radical
 alge405 Solving a radical equation with two radicals that simplifies to $\sqrt{x} = a$
 alge182 Solving a radical equation that simplifies to a quadratic equation: Two radicals
 alge412 Algebraic symbol manipulation with radicals
 alge542 Word problem involving radical equations: Basic
 alge409 Word problem involving radical equations: Advanced
 alge698 Solving an equation of the form $x^3 = a$ using integers
 geom565 Finding the side length of a cube given its volume
 alge407 Introduction to the Pythagorean Theorem
 geom044 Pythagorean Theorem
 alge408 Word problem involving the Pythagorean Theorem
 geom862 Using the Pythagorean Theorem repeatedly
 geom603 Identifying side lengths that give right triangles
 geom588 Informal proof of the Pythagorean Theorem
 alge713 Using the Pythagorean Theorem and a quadratic equation to find side lengths of a right triangle
 alge132 Distance between two points in the plane: Exact answers
 alge324 Distance between two points in the plane: Decimal answers
 alge191 Midpoint of a line segment in the plane
 alge414 Finding an endpoint of a line segment given the other endpoint and the midpoint
 pcalc609 Sine, cosine, and tangent ratios: Numbers for side lengths
 pcalc600 Sine, cosine, and tangent ratios: Variables for side lengths
 pcalc616 Using a calculator to approximate sine, cosine, and tangent values
 pcalc606 Using the Pythagorean Theorem to find a trigonometric ratio
 pcalc008 Finding trigonometric ratios given a right triangle
 geom317 Understanding trigonometric ratios through similar right triangles
 geom318 Using similar right triangles to find trigonometric ratios
 pcalc607 Using a trigonometric ratio to find a side length in a right triangle
 pcalc610 Using trigonometry to find a length in a word problem with one right triangle
 pcalc608 Using a trigonometric ratio to find an angle measure in a right triangle
 pcalc611 Using trigonometry to find angles of elevation or depression in a word problem
 pcalc642 Solving a right triangle

Data Analysis and Probability

mstat088 Identifying statistical questions
 mstat080 Choosing an appropriate method for gathering data: Problem type 1
 mstat081 Choosing an appropriate method for gathering data: Problem type 2
 mstat047 Introduction to expectation
 mstat097 Constructing a two-way frequency table: Basic
 mstat098 Constructing a two-way frequency table: Advanced
 mstat049 Computing a percentage from a table of values
 mstat087 Making an inference using a two-way frequency table
 stat020 Calculating relative frequencies in a contingency table
 mstat025 Finding if a question can be answered by the data
 stat805 Making a reasonable inference based on proportion statistics
 mstat037 Constructing a line plot
 mstat004 Constructing a histogram for numerical data

mstat024 Interpreting a bar graph
mstat044 Interpreting a double bar graph
mstat031 Interpreting a stem-and-leaf plot
stat804 Interpreting a circle graph or pie chart
arith856 Finding a percentage of a total amount in a circle graph
stat801 Computations from a circle graph
geom814 Angle measure in a circle graph
mstat003 Mode of a data set
mstat055 Finding the mode and range of a data set
mstat092 Finding the mode and range from a line plot
mstat001 Mean of a data set
mstat077 Using a model to find the mean
mstat091 Finding the mean of a symmetric distribution
mstat079 Finding sample size and comparing samples for estimating the mean
mstat089 Computations involving the mean, sample size, and sum of a data set
stat803 Finding the value for a new score that will yield a given mean
stat802 Rejecting unreasonable claims based on average statistics
mstat066 Weighted mean
mstat028 Mean and median of a data set
mstat029 How changing a value affects the mean and median
mstat095 Finding outliers in a data set
mstat053 Choosing the best measure to describe data
stat009 Percentiles
mstat027 Using back-to-back stem-and-leaf plots to compare data sets
mstat072 Five-number summary and interquartile range
mstat006 Constructing a box-and-whisker plot
mstat073 Using box-and-whisker plots to compare data sets
mstat082 Computing mean absolute deviation from a list of numerical values
mstat042 Interpreting a Venn diagram of 2 sets
mstat043 Interpreting a Venn diagram of 3 sets
mstat041 Interpreting a tree diagram
mstat040 Introduction to the counting principle
mstat015 Counting principle
pcalc082 Factorial expressions
mstat017 Computing permutations and combinations
mstat008 Word problem involving permutations
mstat009 Word problem involving combinations
stat790 Permutations, combinations, and the multiplication principle for counting
mstat099 Determining a sample space and outcomes for a simple event
mstat100 Determining a sample space and outcomes for a compound event
mstat026 Introduction to the probability of an event
mstat010 Probability of an event
mstat046 Experimental and theoretical probability
stat106 Outcomes and event probability
stat112 Probabilities involving two dice
mstat116 Probabilities of a permutation and a combination
mstat048 Odds of an event
mstat011 Area as probability
mstat019 Identifying independent events given descriptions of experiments
mstat012 Probability of independent events
mstat013 Probability of dependent events
stat117 Probabilities of draws with replacement
stat118 Probabilities of draws without replacement
mstat115 Determining outcomes for compound events and complements of events
mstat110 Using a Venn diagram to understand the multiplication rule for probability
mstat107 Outcomes and event probability: Conditional probability
mstat104 Identifying independent events given values of probabilities
mstat105 Computing conditional probability using a two-way frequency table
mstat106 Computing conditional probability to make an inference using a two-way frequency table
mstat118 Conditional probability: Basic
mstat109 Using a Venn diagram to understand the addition rule for probability
mstat108 Outcomes and event probability: Addition rule

mstat032 Probability of the union of two events
 mstat117 Probability of intersection or union: Word problems
 mstat085 Identifying outcomes in a random number table used to simulate a compound event
 mstat086 Using a random number table to simulate a compound event
 mstat114 Using a random number table to make a fair decision
 stat021 Population standard deviation
 stat852 Word problem involving calculations from a normal distribution

Rational Expressions

alge049 Restriction on a variable in a denominator: Linear
 alge467 Restriction on a variable in a denominator: Quadratic
 alge468 Evaluating a rational function: Problem type 1
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