



Prep for Beginning Algebra

This course covers the topics outlined below. You can customize the scope and sequence of this course to meet your curricular needs.

Curriculum Show All (135 topics + 42 additional topics)

- Arithmetic and Geometry (53 topics)
 - ◆ Whole Numbers (10 topics)
 - ◇ Introduction to exponents
 - ◇ Writing expressions using exponents
 - ◇ Introduction to order of operations
 - ◇ Order of operations with whole numbers
 - ◇ Order of operations with whole numbers and grouping symbols
 - ◇ Order of operations with whole numbers and exponents: Basic
 - ◇ Factors
 - ◇ Greatest common factor of 2 numbers
 - ◇ Least common multiple of 2 numbers
 - ◇ Square root of a perfect square
 - ◆ Fractions (19 topics)
 - ◇ Fractional position on a number line
 - ◇ Plotting fractions on a number line
 - ◇ Equivalent fractions
 - ◇ Simplifying a fraction
 - ◇ Ordering fractions with the same denominator
 - ◇ Using a common denominator to order fractions
 - ◇ Addition or subtraction of fractions with the same denominator
 - ◇ Introduction to addition or subtraction of fractions with different denominators
 - ◇ Addition or subtraction of fractions with different denominators
 - ◇ Product of a unit fraction and a whole number
 - ◇ Product of a fraction and a whole number: Problem type 1
 - ◇ Introduction to fraction multiplication
 - ◇ Fraction multiplication
 - ◇ The reciprocal of a number
 - ◇ Division involving a whole number and a fraction
 - ◇ Fraction division
 - ◇ Mixed arithmetic operations with fractions
 - ◇ Writing an improper fraction as a mixed number
 - ◇ Writing a mixed number as an improper fraction
 - ◆ Decimals (17 topics)
 - ◇ Decimal place value: Tenths and hundredths
 - ◇ Rounding decimals
 - ◇ Ordering decimals
 - ◇ Addition of aligned decimals
 - ◇ Decimal addition with 3 numbers
 - ◇ Subtraction of aligned decimals
 - ◇ Multiplication of a decimal by a power of ten

- ◇ Multiplying a decimal by a whole number
- ◇ Decimal multiplication: Problem type 1
- ◇ Division of a decimal by a power of ten
- ◇ Division of a decimal by a whole number
- ◇ Division of a decimal by a 2–digit decimal
- ◇ Converting a fraction to a terminating decimal
- ◇ Converting a fraction to a repeating decimal
- ◇ Word problem with one decimal operation: Problem type 1
- ◇ Word problem with one decimal operation: Problem type 2
- ◇ Word problem with decimal addition and multiplication
- ◆ Geometry (7 topics)
 - ◇ Perimeter of a polygon
 - ◇ Perimeter of a square or a rectangle
 - ◇ Finding the missing length in a figure
 - ◇ Area of a square or a rectangle
 - ◇ Area of a piecewise rectangular figure
 - ◇ Circumference and area of a circle
 - ◇ Volume of a rectangular prism
- Real Numbers and Algebraic Expressions (31 topics)
 - ◆ Signed Numbers (25 topics)
 - ◇ Ordering integers
 - ◇ Writing a signed number for a real–world situation
 - ◇ Plotting integers on a number line
 - ◇ Integer addition: Problem type 1
 - ◇ Integer addition: Problem type 2
 - ◇ Integer subtraction: Problem type 1
 - ◇ Integer subtraction: Problem type 2
 - ◇ Integer subtraction: Problem type 3
 - ◇ Word problem with addition or subtraction of integers
 - ◇ Signed fraction addition or subtraction: Basic
 - ◇ Signed fraction addition or subtraction: Advanced
 - ◇ Signed decimal addition and subtraction
 - ◇ Signed decimal addition and subtraction with 3 numbers
 - ◇ Integer multiplication and division
 - ◇ Multiplication of 3 or 4 integers
 - ◇ Signed fraction multiplication: Basic
 - ◇ Signed fraction multiplication: Advanced
 - ◇ Exponents and integers: Problem type 1
 - ◇ Exponents and signed fractions
 - ◇ Order of operations with integers
 - ◇ Order of operations with integers and exponents
 - ◇ Evaluating an algebraic expression: Whole numbers with two operations
 - ◇ Evaluating a linear expression: Integer multiplication with addition or subtraction
 - ◇ Evaluating a quadratic expression: Integers
 - ◇ Absolute value of a number
 - ◆ Properties of Real Numbers (6 topics)
 - ◇ Identifying numbers as integers or non–integers
 - ◇ Properties of addition
 - ◇ Distributive property: Whole number coefficients
 - ◇ Distributive property: Integer coefficients
 - ◇ Combining like terms: Whole number coefficients
 - ◇ Combining like terms: Integer coefficients
- Linear Equations and Inequalities (30 topics)

- ◆ Linear Equations (15 topics)
 - ◇ Additive property of equality with whole numbers
 - ◇ Additive property of equality with decimals
 - ◇ Additive property of equality with integers
 - ◇ Additive property of equality with a negative coefficient
 - ◇ Multiplicative property of equality with whole numbers
 - ◇ Multiplicative property of equality with fractions
 - ◇ Multiplicative property of equality with decimals
 - ◇ Multiplicative property of equality with integers
 - ◇ Multiplicative property of equality with signed fractions
 - ◇ Using two steps to solve an equation with whole numbers
 - ◇ Solving a two–step equation with integers
 - ◇ Solving a two–step equation with signed fractions
 - ◇ Solving a linear equation with several occurrences of the variable: Variables on the same side and distribution
 - ◇ Solving a linear equation with several occurrences of the variable: Variables on both sides and distribution
 - ◇ Introduction to algebraic symbol manipulation
- ◆ Applications of Linear Equations (8 topics)
 - ◇ Writing a one–step expression for a real–world situation
 - ◇ Translating a phrase into a two–step expression
 - ◇ Translating a sentence into a one–step equation
 - ◇ Solving a fraction word problem using a linear equation of the form $Ax = B$
 - ◇ Solving a word problem with two unknowns using a linear equation
 - ◇ Solving a decimal word problem using a linear equation of the form $Ax + B = C$
 - ◇ Finding an angle measure of a triangle given two angles
 - ◇ Finding the side length of a rectangle given its perimeter or area
- ◆ Linear Inequalities and Applications (7 topics)
 - ◇ Translating a sentence by using an inequality symbol
 - ◇ Graphing a linear inequality on the number line
 - ◇ Writing an inequality given a graph on the number line
 - ◇ Solving a linear inequality: Problem type 1
 - ◇ Solving a linear inequality: Problem type 2
 - ◇ Solving a linear inequality: Problem type 3
 - ◇ Writing an inequality for a real–world situation
- Percents and Proportions (13 topics)
 - ◆ Percents (9 topics)
 - ◇ Converting between percentages and decimals
 - ◇ Converting a percentage to a fraction in simplest form
 - ◇ Converting a fraction to a percentage: Denominator of 20, 25, or 50
 - ◇ Writing a ratio as a percentage without a calculator
 - ◇ Finding a percentage of a whole number without a calculator: Basic
 - ◇ Applying the percent equation
 - ◇ Finding the sale price without a calculator given the original price and percent discount
 - ◇ Finding the original price given the sale price and percent discount
 - ◇ Finding simple interest without a calculator
 - ◆ Proportions and Rates (4 topics)
 - ◇ Solving a proportion of the form $x/a = b/c$
 - ◇ Solving a word problem on proportions using a unit rate
 - ◇ Word problem on proportions: Problem type 1
 - ◇ Solving a one–step word problem using the formula $d = rt$
- Lines and Functions (8 topics)
 - ◆ Sets and Functions (1 topics)

- ◇ Table for a linear equation
- ◆ Graphing Lines (7 topics)
 - ◇ Reading a point in the coordinate plane
 - ◇ Plotting a point in the coordinate plane
 - ◇ Finding a solution to a linear equation in two variables
 - ◇ Graphing a line given its x - and y -intercepts
 - ◇ Graphing a line given its equation in slope-intercept form
 - ◇ Graphing a vertical or horizontal line
 - ◇ Interpreting a line graph
- Other Topics Available(*) (42 additional topics)
 - ◆ Arithmetic and Geometry (15 topics)
 - ◇ Prime numbers
 - ◇ Prime factorization
 - ◇ Fractional part of a circle
 - ◇ Mixed number addition with the same denominator and renaming
 - ◇ Mixed number subtraction with the same denominator and renaming
 - ◇ Addition or subtraction of mixed numbers with different denominators
 - ◇ Mixed number multiplication: Problem type 1
 - ◇ Mixed number division
 - ◇ Converting a mixed number to a decimal
 - ◇ Converting a decimal to a proper fraction in simplest form: Advanced
 - ◇ Area of a triangle
 - ◇ Area of a parallelogram
 - ◇ Word problem involving the area between two concentric circles
 - ◇ Area involving rectangles and circles
 - ◇ Volume of a cylinder
 - ◆ Real Numbers and Algebraic Expressions (4 topics)
 - ◇ Exponents and integers: Problem type 2
 - ◇ Operations with absolute value: Problem type 2
 - ◇ Identifying numbers as rational or irrational
 - ◇ Properties of real numbers
 - ◆ Linear Equations and Inequalities (12 topics)
 - ◇ Additive property of equality with fractions and mixed numbers
 - ◇ Solving a two-step equation with signed decimals
 - ◇ Solving an equation to find the value of an expression
 - ◇ Solving equations with zero, one, or infinitely many solutions
 - ◇ Solving a decimal word problem using a linear equation with the variable on both sides
 - ◇ Solving a fraction word problem using a linear equation with the variable on both sides
 - ◇ Solving a word problem with three unknowns using a linear equation
 - ◇ Solving a value mixture problem using a linear equation
 - ◇ Solving equations involving vertical angles
 - ◇ Finding a side length given the perimeter and side lengths with variables
 - ◇ Solving a linear inequality: Problem type 5
 - ◇ Solving a decimal word problem using a two-step linear inequality
 - ◆ Percents and Proportions (6 topics)
 - ◇ Computing a percentage from a table of values
 - ◇ Finding the percentage increase or decrease: Advanced
 - ◇ Computations from a circle graph
 - ◇ Word problem on unit rates associated with ratios of whole numbers: Decimal answers
 - ◇ Solving a word problem involving rates and time conversion
 - ◇ Converting between metric and U.S. Customary unit systems

◆ Lines and Functions (5 topics)

- ◇ Set-builder notation
- ◇ Table for a linear function
- ◇ Writing an equation and drawing its graph to model a real-world situation: Advanced
- ◇ Finding slope given the graph of a line on a grid
- ◇ Finding slope given two points on the line

***Other Topics Available** *By default, these topics are NOT included in the course, but can be added using the content editor in the Teacher Module.*