ALEKS®

Mathematics - LV 3 (with QuickTables)

This course covers the topics shown below.
Students navigate learning paths based on their level of readiness.
Institutional users may customize the scope and sequence to meet curricular needs.

Curriculum (95 topics + 145 additional topics)

- Whole Number Place Value (6 topics)

  - Place Value (1 topics)
    - Whole number place value: Problem type 1

  - Numeral Translation (1 topics)
    - Numeral translation: Problem type 1

  - Expanded Form (2 topics)
    - Expanded form: 2 and 3-digit numbers
    - Expanded form: 4 and 5-digit numbers

  - Ordering Whole Numbers (1 topics)
    - Introduction to inequalities

  - Rounding Whole Numbers (1 topics)
    - Rounding to tens or hundreds

- Adding Whole Numbers (14 topics)

  - Understanding Addition with One-Digit Numbers (2 topics)
    - One-digit addition with regrouping
    - Addition of 3 or 4 one-digit numbers

  - Adding Two-Digit Numbers (8 topics)
    - Adding 2-digit numbers without regrouping
    - Adding a 2-digit number and a 1-digit number with regrouping
    - Finding numbers that add to a multiple of 10
    - Adding by making a ten
    - Adding 2-digit numbers with regrouping a ten
    - Adding multiples of 10 and 100
    - Adding 2-digit numbers with regrouping a hundred
    - Adding 3 or 4 numbers with two-digits with regrouping

  - Adding Three-Digit Numbers or Greater (3 topics)
    - Adding by making a hundred
    - Addition without regrouping using place values
    - Adding 3-digit numbers with regrouping

  - Estimating Sums and Properties of Addition (1 topics)
    - Estimating a sum of whole numbers: Problem type 1

- Subtracting Whole Numbers (10 topics)

  - Subtracting One-Digit Numbers (2 topics)
    - Subtracting a 1-digit number from a 2-digit number
    - Fact families for addition and subtraction

  - Subtracting with Two- or Three-Digit Numbers (6 topics)
    - Subtraction of 2-digit numbers without regrouping
    - Subtracting multiples of 10 and 100
    - Subtraction involving 3-digit numbers without regrouping
    - Subtraction of 2-digit numbers with regrouping
    - Subtraction with multiple regrouping steps involving 3-digit numbers
    - Word problem with addition or subtraction of whole numbers

  - Estimating Differences (1 topics)
    - Estimating a difference of whole numbers: Problem type 1

  - Expressions and Solving Equations (1 topics)
    - Additive property of equality with whole numbers

- Multiplying Whole Numbers (12 topics)

- Multiplication Facts and Repeated Addition (5 topics)
  - Using equal groups to find a total
  - Multiplying a 1-digit number by 2, 3, 4, or 5
  - Multiplying a 1-digit number by 6, 7, 8, or 9
  - Rewriting a repeated addition as a multiplication sentence
  - Writing addition and multiplication sentences for equal groups

- Rectangular Arrays (1 topics)
  - Using multiplication to find the number of squares

- Word Problems Involving Multiplication (2 topics)
  - Word problem with multiplication of whole numbers
  - Writing a multiplication shown in a picture

- Multiplying by Multiples of 10, 100, and 1000 (1 topics)
  - Understanding multiplication of a 1-digit number by a multiple of 10

- Properties of Multiplication (3 topics)
  - Using the distributive property to multiply two whole numbers
  - Finding multiples of 2, 5, or 10
  - Finding multiples of 3, 4, 6, 7, 8, or 9
- Dividing Whole Numbers (8 topics)

  - Division Facts (4 topics)
    - Completing division facts: Divisors 2-5
    - Completing division facts: Divisors 6-9
    - Finding the unknown number in related multiplication and division facts
    - Creating related multiplication and division facts

  - Word Problems Involving Division (2 topics)
    - Word problem with division of whole numbers
    - Describing a picture using both words and a division sentence

  - Order of Operations and Solving Equations (2 topics)
    - Introduction to parentheses
    - Introduction to solving an equation with multiplication or division

- Fractions (9 topics)

  - Fractions of a Whole (2 topics)
    - Understanding unit fractions
    - Understanding non-unit fractions

  - Understanding Equivalent Fractions with Models (3 topics)
    - Understanding equivalent fractions with shapes containing up to 8 equal parts
    - Creating a model and completing a fraction to show equivalent fractions
    - Conversions involving division in fractional form and whole numbers

  - Fractions on the Number Line (2 topics)
    - Identifying a fraction on a number line
    - Plotting fractions on a number line

  - Ordering Fractions (2 topics)
    - Comparing fractions with the same denominator
    - Comparing fractions with the same numerator

- Measurement (13 topics)

  - Telling Time (3 topics)
    - Telling time: Minutes are a multiple of 5
    - Telling time: Minutes are not a multiple of 5
    - Telling time and determining a.m. or p.m.

  - Time Intervals (4 topics)
    - Word problem involving adding or subtracting time within the hour
    - Introduction to adding time
    - Word problem on elapsed time within the hour
    - Word problem on elapsed time less than one hour

  - Solving Problems with Metric Units of Volume and Mass (3 topics)
    - Choosing metric measurement units
    - Word problem involving metric mass or volume: Addition or subtraction
    - Word problem involving metric mass or volume: Multiplication or division

- - Measuring with U.S. Customary Units (3 topics)
    - Choosing U.S. Customary measurement units
    - Measuring length to the nearest inch
    - Measuring the length of an object to the nearest quarter or half inch
- Representing and Interpreting Data (6 topics)

  - Pictographs (2 topics)
    - Interpreting a tally table
    - Interpreting data in a scaled pictograph

  - Bar and Line Graphs (2 topics)
    - Representing data on a bar graph
    - Interpreting data in a bar graph with up to six categories

  - Line Plots (2 topics)
    - Representing data on a dot plot
    - Representing data with fractional values on a dot plot

- Perimeter and Area (14 topics)

  - Perimeter (4 topics)
    - Perimeter of a polygon
    - Perimeter of a rectangle on a grid
    - Perimeter of a square or a rectangle
    - Finding the missing length in a figure

  - Applications Involving Perimeter (2 topics)
    - Word problem on finding the perimeter of a rectangle
    - Finding an unknown side length of a polygon given the perimeter

  - Area of Rectangles (3 topics)
    - Finding the area of a rectangle on a grid
    - Finding the area of a rectangle with 1-digit side lengths
    - Relating the area of a rectangle to multiplying its side lengths

  - Applications Involving Area of Rectangles (2 topics)
    - Solving a one-step word problem involving the area of a rectangle
    - Representing an area model using the distributive property

  - Area of Composite Figures (3 topics)
    - Finding the area of a rectilinear figure on a grid
    - Introduction to area of a piecewise rectangular shape
    - Word problem on finding the area of a piecewise rectangular figure

- Geometry (3 topics)

  - Segments, Rays, and Lines (1 topics)
    - Identifying parallel and perpendicular lines

  - Classifying Angles and Triangles (1 topics)
    - Classifying angles as smaller than right, right, larger than right

  - Quadrilaterals (1 topics)
    - Determining shared attributes of quadrilaterals

- Other Topics Available(*) (145 additional topics)

  - Whole Number Place Value (6 topics)
    - Whole number place value: Problem type 2
    - Numeral translation: Problem type 2
    - Expanded form with zeros
    - Ordering large numbers
    - Rounding to hundreds or thousands
    - Rounding to thousands, ten thousands, or hundred thousands

  - Adding Whole Numbers (3 topics)
    - Adding 3 numbers with two, three, and four-digits
    - Estimating a sum of whole numbers: Problem type 2
    - Introduction to properties of addition

  - Subtracting Whole Numbers (6 topics)
    - Addition or subtraction with 10 or 100
    - Addition or subtraction with 10, 100, or 1000

- Subtraction with multiple regrouping steps involving 4-digit numbers
- Subtraction and regrouping with zeros
- Estimating a difference of whole numbers: Problem type 2
- Evaluating an algebraic expression: Whole number addition or subtraction

- Multiplying Whole Numbers (15 topics)
  - Multiplying 2-digit and 1-digit numbers without regrouping
  - Using addition and multiplication to count the objects on a grid
  - Multiplicative comparison involving groups of objects
  - Solving a word problem involving a multiplicative or additive comparison
  - Multiplication by 10, 100, and 1000
  - Multiplication with trailing zeros: Problem type 1
  - Introduction to properties of multiplication
  - Comparing a numerical expression with a number
  - Multiplying 2-digit and 1-digit numbers with regrouping: Problem type 1
  - Multiplying 2-digit and 1-digit numbers with regrouping: Problem type 2
  - Understanding multiplication of a one-digit number with a larger number
  - Multiplying multi-digit and 1-digit numbers with regrouping
  - Introduction to multiplication of large numbers
  - Multiplication with trailing zeros: Problem type 2
  - Estimating a product

- Dividing Whole Numbers (32 topics)
  - Solving a word problem with multiplication or division: Up to 2-digit numbers
  - Word problem with multiplication and addition or subtraction of whole numbers
  - Introduction to order of operations
  - Introduction to the distributive property
  - Evaluating an algebraic expression: Whole number multiplication or division
  - Writing a one-step expression for a real-world situation
  - Division without regrouping
  - Division with regrouping: 1-digit divisor, 2-digit dividend
  - Quotient with remainder: 1-digit divisor, 2-digit dividend
  - Writing a division sentence for equal groups
  - Writing a division sentence for equal groups and a remainder
  - Whole number division: 2-digit by 2-digit, no remainder
  - Word problem on quotient and remainder
  - Word problem with division of whole numbers and rounding: Problem type 1
  - Filling in missing operations to make an equation
  - Division with trailing zeros: Problem type 1
  - Division with regrouping: 1-digit divisor, 3-digit or 4-digit dividend
  - Quotient with remainder: 1-digit divisor, 3-digit or 4-digit dividend
  - Division involving quotients with intermediate zeros: Problem type 1
  - Division involving quotients with intermediate zeros: Problem type 2
  - Division with remainder involving quotients with intermediate zeros: Problem type 1
  - Division with remainder involving quotients with intermediate zeros: Problem type 2
  - Division with trailing zeros: Problem type 2
  - Estimating a quotient
  - Describing an increasing or decreasing pattern from a table of values
  - Function tables with one-step rules
  - Finding the next terms of an arithmetic sequence with whole numbers
  - Finding the next terms of a geometric sequence with whole numbers
  - Finding patterns in shapes
  - Factors
  - Even and odd numbers
  - Divisibility rules for 2, 5, and 10

- Fractions (16 topics)
  - Understanding equivalent fractions: Problem type 2
  - Division of whole numbers given in fractional form
  - Introduction to finding equivalent fractions: Multiplying
  - Introduction to finding equivalent fractions: Dividing
  - Writing a fraction with denominator 10 as a fraction with denominator 100
  - Equivalent fractions
  - Introduction to simplifying a fraction
  - Product of a unit fraction and a whole number
  - Addition or subtraction of fractions with the same denominator
  - Addition or subtraction of fractions with the same denominator and simplification
  - Word problem involving addition or subtraction of fractions with the same denominator
  - Writing a mixed number and an improper fraction for a shaded region
  - Writing an improper fraction as a mixed number
  - Writing a mixed number as an improper fraction
  - Position of mixed numbers on a number line
  - Plotting mixed numbers on a number line

- Measurement (17 topics)
  - Word problem on elapsed time more than one hour
  - Reading a calendar
  - Time unit conversion with whole number values
  - Measuring length to the nearest centimeter
  - Conversion table with metric distance
  - Metric distance conversion with whole number values
  - Conversion table with metric mass or volume
  - Metric mass or volume conversion with whole number values
  - Choosing a measuring tool
  - Reading a positive temperature from a thermometer
  - Conversion table with U.S. Customary length
  - U.S. Customary length conversion with whole number values
  - Conversions involving measurements in feet and inches
  - Conversion table with U.S. Customary weight
  - Conversion table with U.S. Customary volume
  - U.S. Customary volume conversion with whole number values
  - U.S. Customary weight conversions with whole number values

- Representing and Interpreting Data (10 topics)
  - Interpreting a pictograph table
  - Interpreting a line graph
  - Finding the mode and range of a data set
  - Finding the mode and range from a dot plot (line plot)
  - Interpreting a Venn diagram of 2 sets
  - Introduction to the counting principle
  - Classifying likelihood
  - Introduction to the probability of an event
  - Reading a point in quadrant 1
  - Plotting a point in quadrant 1

- Perimeter and Area (7 topics)
  - Perimeter of a piecewise rectangular figure
  - Area of a rectangle with two-digit by one-digit side lengths
  - Area of a piecewise rectangular figure
  - Classifying solids
  - Vertices, edges, and faces of a solid
  - Nets of solids
  - Volume of a rectangular prism made of unit cubes

- Geometry (9 topics)
  - Naming segments, rays, and lines
  - Acute, obtuse, and right angles
  - Acute, obtuse, and right triangles
  - Naming polygons
  - Identifying parallelograms, rectangles, and squares
  - Drawing lines of symmetry
  - Identifying congruent shapes on a grid
  - Identifying similar or congruent shapes on a grid
  - Identifying transformations

- Decimals (24 topics)
  - Decimal place value: Tenths and hundredths
  - Decimal place value: Hundreds to ten thousandths
  - Writing a decimal number less than 1 given its name
  - Writing a decimal number greater than 1 given its name
  - Writing a decimal and a fraction for a shaded region
  - Converting a fraction with a denominator of 10 or 100 to a decimal
  - Converting a decimal to a proper fraction without simplifying: Basic
  - Reading decimal position on a number line: Tenths
  - Reading decimal position on a number line: Hundredths
  - Introduction to ordering decimals
  - Ordering decimals
  - Finding the value of a collection of coins
  - Finding the value of a collection of bills and coins
  - Addition with money
  - Subtraction with money
  - Addition of decimals: Vertically aligned
  - Decimal addition with 2 numbers
  - Decimal addition with 3 numbers
  - Word problem with addition of 3 or 4 decimals and whole numbers
  - Subtraction of aligned decimals
  - Decimal subtraction: Basic
  - Decimal subtraction: Advanced

- Word problem with addition or subtraction of 2 decimals
- Word problem with subtraction of a whole number and a decimal: Regrouping with zeros

*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.

QuickTables ALEKS QuickTables is a research−based, math fact mastery program for multiplication, division, addition, and subtraction for grades 3 and up. The online program offers ongoing assessment, learning, review, and visual tracking of student progress.