California's Algebra 1A and 1B courses address the need for an expanded, two-year treatment of traditional high school Algebra I curriculum. Algebra 1B course topics include a review of introductory algebra; measurement; graphing data; linear equations; systems of linear equations; polynomials; factoring of polynomials; factoring of quadratic functions; and rational expressions.

Algebra 1B features ample opportunity for students to hone their computational skills by working through practice problem sets before moving on to formal assessment.

When used together, Algebra 1A and Algebra 1B meet California's Algebra I Mathematics Content Standards.

Length: Two semesters

UNIT 1: USING LOGIC TO SOLVE PROBLEMS

LESSON 1: BUILDING EQUATIONS

Study: Building Equations
Learn about setting up an equation using information in a word problem and about choosing the correct operation(s). Practice these skills using sample problems.
Duration: 0 hrs 25 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 20 mins

Quiz: Building Equations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 2: DEDUCTIVE REASONING

Study: Deductive Reasoning
Learn the definition of deductive reasoning. Practice making conclusions and deducing which statements in a problem are true. Practice these skills using sample problems.
Duration: 0 hrs 25 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 20 mins

Quiz: Deductive Reasoning
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 3: INDUCTIVE REASONING

Study: Inductive Reasoning
Explore inductive reasoning and using induction to continue a pattern. Practice these skills using sample problems.
Duration: 0 hrs 25 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 20 mins

Quiz: Inductive Reasoning

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 4: LOGIC PUZZLES

Study: Logic Puzzles

Learn about organizing logic data in a grid and about direct and indirect information. Practice these skills using sample logic problems.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 20 mins

Quiz: Logic Puzzles

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 5: PROBLEM SOLVING

Study: Problem Solving

Learn strategies for solving a variety of application problems related to topics in this unit.

Duration: 0 hrs 25 mins

Checkup: Practice Assignment

Submit your work for a set of problem-solving applications.

Duration: 0 hrs 30 mins Scoring: 0 points

LESSON 6: USING LOGIC TO SOLVE PROBLEMS WRAP-UP

Review: Using Logic to Solve Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Using Logic to Solve Problems

Take part in a three- to five-question discussion about applying methods learned in this unit.

Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Using Logic to Solve Problems

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Using Logic to Solve Problems

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 2: REVIEW OF ALGEBRA I-A

LESSON 1: INTEGERS AND OPERATIONS

Study: Integers and Operations

Review sets; subsets; elements; whole numbers; positive and negative integers; the number line; absolute value; arithmetic operations and their properties; and the order of operations.

Duration: 0 hrs 50 mins

Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Integers and Operations

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: FRACTIONS AND DECIMALS

Study: Fractions and Decimals

Review fraction terminology (including *numerator* and *denominator*); performing operations with fractions; real (rational and irrational) numbers; equivalent fractions; prime numbers and factorization; least common multiples; reciprocals; and converting fractions to decimals and percentages.

Duration: 0 hrs 50 mins

Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Fractions and Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: EXPONENTS

Study: Exponents

Review exponents and their place in the order of operations; laws for evaluating exponential expressions; fractional and decimal exponents; radical notation and principal square roots; laws for simplifying radical expressions; and scientific notation.

Duration: 0 hrs 50 mins

Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: VARIABLES AND PROBLEM SOLVING

Study: Variables and Problem Solving

Review variable expressions; mathematical sentences; equations and inequalities; solution sets; and steps to solving algebraic problems.

Duration: 0 hrs 50 mins

Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Variables and Problem Solving

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: SOLVING WITH ADDITION AND SUBTRACTION

Study: Solving with Addition and Subtraction

Review isolating variables, using a number line to solve equations and solution sets for inequalities.

Duration: 0 hrs 50 mins

Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Practice: Number Line Tool

Use algebra and a number line tool to solve equations.

Duration: 0 hrs 40 mins Scoring: 20 points

Quiz: Solving with Addition and Subtraction

Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: SOLVING WITH MULTIPLICATION AND DIVISION

Study: Solving with Multiplication and Division
Review solving equations involving multiplication and division, including by using a number line, and review solving inequalities with multiplication and division.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Practice: Number Line Tool
Use algebra and a number line tool to solve equations.
Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Solving with Multiplication and Division
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: SOLVING MULTISTEP LINEAR EQUATIONS

Study: Solving Multistep Linear Equations
Review collecting like terms by using both addition/subtraction and multiplication/division and review identifying equations that are never or always true.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving Multistep Linear Equations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 8: REVIEW OF ALGEBRA I-A WRAP-UP

Review: Review of Algebra I-A
Check your understanding of the topics in this unit.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: When Does a Number Become Scientific?
Take part in a discussion about applying methods learned in this unit.
Duration: 0 hrs 20 mins Scoring: 20 points

Test (CS): Review of Algebra I-A
Take a computer-scored test to assess what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Review of Algebra I-A
Take a teacher-scored test to assess what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 3: SOLVING EQUATIONS AND INEQUALITIES

LESSON 1: RATIONAL AND IRRATIONAL NUMBERS

Study: Rational and Irrational Numbers
Learn about different types of real numbers, including rational and irrational numbers. Investigate sums and products of rational and irrational numbers.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Rational and Irrational Numbers
Take a quiz to assess your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: SOLVING LINEAR INEQUALITIES

Study: Solving Linear Inequalities
Solve multistep inequalities, including those that involve collecting like terms.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Linear Inequalities
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: LITERAL EQUATIONS

Study: Literal Equations
Learn how to solve literal equations, including formulas, for a particular variable.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Literal Equations
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: MEASUREMENT AND UNITS

Study: Measurement and Units
Explore the ideas of precision and accuracy in measurement. Solve problems involving a single unit conversion and those requiring multiple conversions.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Measurement and Units
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Measurement and Units
Construct arguments and critique the reasoning of others as you write about topics in algebra.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 5: PERFORMANCE TASK: PROBLEM SOLVING WITH INEQUALITIES

Study: Problem Solving with Inequalities
Learn strategies for solving a variety of application problems related to topics in this unit.
Duration: 0 hrs 45 mins

Project: Performance Task: A Trade Show Booth
Use your knowledge, skills, and resources to make sense of and persevere in solving a real-world problem.

Duration: 2 hrs Scoring: 80 points

LESSON 6: SOLVING EQUATIONS AND INEQUALITIES WRAP-UP

Review: Solving Equations and Inequalities Practice Problems
Check your understanding of the topics in this unit.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: In Your Own Words
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Solving Equations and Inequalities
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 46 points

Test (TS): Solving Equations and Inequalities
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 46 points

UNIT 4: LINEAR EQUATIONS

LESSON 1: SLOPE

Study: Slope
Learn how to find the slope of a line, define rise and run, and measure rates of change.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Slope
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Slope
Construct arguments and critique the reasoning of others as you write about topics in algebra.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 2: SLOPE-INTERCEPT EQUATION OF A LINE

Study: Slope-Intercept Equation of a Line
Learn to use the slope and *y*-intercept of a line to write its slope-intercept equation. Understand the meaning of the slope and *y*-intercept in slope-intercept equations that model real-world situations.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Slope-Intercept Equation of a Line
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Slope-Intercept Equation of a Line
Model and solve a real-world problem.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 3: POINT-SLOPE EQUATION OF A LINE

Study: Point-Slope Equation of a Line
Write point-slope equations for lines given a point and the slope or two points. Rewrite point-slope equations in slope-

intercept form.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Point-Slope Equation of a Line

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: PARALLEL AND PERPENDICULAR LINES

Study: Parallel and Perpendicular Lines

Learn about parallel and perpendicular lines and the relationships between their slopes. Write equations for lines perpendicular and parallel to given lines.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Parallel and Perpendicular Lines

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: LINEAR INEQUALITIES

Study: Linear Inequalities

Learn how to graph the half-planes that represent solutions for linear inequalities.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Linear Inequalities

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: LINEAR EQUATIONS WRAP-UP

Review: Linear Equations Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: A Slippery Slope

Join a three- to five-question discussion to practice methods learned in this unit.

Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Linear Equations

Take a computer-scored test to check what you have learned in this unit.

Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Linear Equations

Take a teacher-scored test to check what you have learned in this unit.

Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 5: EXPONENTS AND EXPONENTIAL FUNCTIONS

LESSON 1: EXPONENTIAL FUNCTIONS

Study: Exponential Functions

Define an exponential function and explore applications of exponential functions, such as exponential growth and decay. Interpret the parts of an exponential expression that represents a real-world context.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Exponential Functions

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Exponential Functions

Model and solve a real-world problem.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 2: GRAPHS OF EXPONENTIAL FUNCTIONS

Study: Graphs of Exponential Functions

Learn about graphs of exponential functions with different bases. Identify the domain, range and *y*-intercept of an exponential function from its equation and from its graph. Use graphs to evaluate exponential functions for given *x*-values.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Graphs of Exponential Functions

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Graphs of Exponential Functions

Construct arguments and critique the reasoning of others as you write about topics in algebra.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 3: ARITHMETIC SEQUENCES

Study: Arithmetic Sequences

Learn about arithmetic sequences, explicit and recursive formulas, and finding the next term in a sequence.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Arithmetic Sequences

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Arithmetic Sequences

Construct arguments and critique the reasoning of others as you write about topics in algebra.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 4: GEOMETRIC SEQUENCES

Study: Geometric Sequences

Explore geometric sequences as sets of numbers in which the ratio between any two consecutive numbers is a constant. Compare how the recursive formula and the explicit formula allow you to find the value of any term in a geometric sequence.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Geometric Sequences
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Geometric Sequences
Model and solve a real-world problem.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 5: UNDERSTANDING NUMBER SEQUENCES

Study: Understanding Number Sequences
Learn about applications and models of arithmetic, geometric, and special sequences.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Understanding Number Sequences
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: EXPONENTIAL AND LINEAR GROWTH

Study: Exponential and Linear Growth
Learn about the connections between linear and exponential functions and arithmetic and geometric sequences.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Exponential and Linear Growth
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: EXPONENTS AND EXPONENTIAL FUNCTIONS WRAP-UP

Review: Exponents and Exponential Functions Practice Problems
Check your understanding of the topics in this unit.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Exponential Potential
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Exponents and Exponential Functions
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Exponents and Exponential Functions
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 6: SEMESTER 1 EXAM

LESSON 1: SEMESTER 1 REVIEW AND EXAM

Review: Semester 1 Review

Prepare for the semester exam by reviewing key concepts covered in Semester 1.

Duration: 1 hr

Exam: Semester 1 Exam

Exam covering the entire semester

Duration: 0 hrs 50 mins Scoring: 200 points

UNIT 7: POLYNOMIALS

LESSON 1: WHAT IS A POLYNOMIAL?

Study: What Is a Polynomial?

Learn the definitions for monomials, polynomials, constants, terms, coefficients, binomials, trinomials, and degree. Learn how to find the degree of polynomials.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: What Is a Polynomial?

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: ADDING AND SUBTRACTING POLYNOMIALS

Study: Adding and Subtracting Polynomials

Learn how to add and subtract polynomials by collecting like terms. Practice adding and subtracting polynomials both vertically and horizontally.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Adding and Subtracting Polynomials

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: ADDING AND SUBTRACTING FUNCTIONS

Study: Adding and Subtracting Functions

Learn how to add and subtract functions.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Adding and Subtracting Functions

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: MULTIPLYING BINOMIALS

Study: Multiplying Binomials

Learn how to multiply binomials using the distributive property. Use the FOIL mnemonic to help you multiply binomials.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Multiplying Binomials
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Multiplying Binomials
Model and solve a real-world problem.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 5: MULTIPLYING POLYNOMIALS

Study: Multiplying Polynomials
Extend the use of the distributive property to multiply polynomials with more than two terms. Use a table to organize the multiplication of polynomials. Practice multiplying polynomials horizontally and vertically.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Multiplying Polynomials
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Multiplying Polynomials
Construct arguments and critique the reasoning of others as you write about topics in algebra.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 6: POLYNOMIALS WRAP-UP

Review: Polynomials Practice Problems
Check your understanding of the topics in this unit.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: FOILed Again
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Polynomials
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Polynomials
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 8: FACTORING POLYNOMIALS

LESSON 1: GCF AND FACTORING BY GROUPING

Study: GCF and Factoring by Grouping
Explore the similarities between factoring numbers and polynomials. Learn how to identify the greatest common factor (GCF) of the terms of a polynomial, and how to use grouping to factor polynomials.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: GCF and Factoring by Grouping
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: FACTORING $x^2 + bx + c$

Study: Factoring $x^2 + bx + c$

Learn the definition of a quadratic trinomial. Learn how to factor quadratic trinomials when the coefficient of the *x*-squared term is 1.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Factoring $x^2 + bx + c$

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: FACTORING $ax^2 + bx + c$

Study: Factoring $ax^2 + bx + c$

Learn how to factor quadratic trinomials with leading coefficients other than 1.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Factoring $ax^2 + bx + c$

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Factoring $ax^2 + bx + c$

Model and solve a real-world problem.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 4: SPECIAL CASES

Study: Special Cases

Learn how to work with special cases of factoring. Learn definitions for a perfect square trinomial and a difference of two squares. Practice using strategies that will help you factor each of these special cases.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Special Cases

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: FACTORING AND GRAPHING

Study: Factoring and Graphing

Compare *x*-intercepts, zeros, roots, and linear factors. Identify the roots of a polynomial. Use the intercepts of the graph of a function to identify the roots and factors of a related equation and vice versa. Understand that a quadratic function may have 0, 1, or 2 real zeros.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Factoring and Graphing

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Factoring and Graphing

Construct arguments and critique the reasoning of others as you write about topics in algebra.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 6: FACTORING POLYNOMIALS WRAP-UP

Review: Factoring Polynomials Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Just the Factors

Join a three- to five-question discussion to practice methods learned in this unit.

Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Factoring Polynomials

Take a computer-scored test to check what you have learned in this unit.

Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Factoring Polynomials

Take a teacher-scored test to check what you have learned in this unit.

Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 9: QUADRATIC EQUATIONS AND FUNCTIONS

LESSON 1: SOLVING QUADRATIC EQUATIONS

Study: Solving Quadratic Equations

Learn to solve quadratics in the form $x^2 = b$ by taking square roots. Use the zero product property to solve quadratic equations by factoring. Learn about standard form and rewrite quadratic equations in that form.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Quadratic Equations

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: COMPLETING THE SQUARE

Study: Completing the Square

Learn the definition for a special case of factoring called completing the square. Explore the steps to complete a square and practice solving quadratic equations by using this way of factoring.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Completing the Square

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Completing the Square

Construct arguments and critique the reasoning of others as you write about topics in algebra.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 3: THE QUADRATIC FORMULA

Study: The Quadratic Formula

Learn the derivation of the quadratic formula and see how it can be used to solve quadratic equations. Understand that the discriminant can be used to determine whether a quadratic equation has 0, 1, or 2 real solutions.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: The Quadratic Formula

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: GRAPHS OF QUADRATIC FUNCTIONS

Study: Graphs of Quadratic Functions

Relate factors of a quadratic function to the graph of a parabola and its corresponding *x*-intercepts. Locate the vertex of a quadratic function graphically and algebraically. Understand vertex form and use it to identify the vertex of a quadratic function.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Graphs of Quadratic Functions

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: LINEAR, QUADRATIC, AND EXPONENTIAL FUNCTIONS

Study: Linear, Quadratic, and Exponential Functions

Identify and compare linear, quadratic, and exponential functions and write functions that model real-world situations.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Linear, Quadratic, and Exponential Functions

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Linear, Quadratic, and Exponential Functions

Model and solve a real-world problem.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 6: PERFORMANCE TASK: PRICING FOR PROFIT

Study: The Headphones Problem

Use what you have learned about graphing polynomials to solve a real-world business problem.

Duration: 0 hrs 45 mins Scoring: 0 points

Project: Your Dog-Walking Business

Use your knowledge, skills, and resources to make sense of and persevere in solving a real-world problem.

Duration: 2 hrs Scoring: 80 points

LESSON 7: QUADRATIC EQUATIONS AND FUNCTIONS WRAP-UP

Review: Quadratic Equations and Functions Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: All Squared Away

Join a three- to five-question discussion to practice methods learned in this unit.

Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Quadratic Equations and Functions

Take a computer-scored test to check what you have learned in this unit.

Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Quadratic Equations and Functions

Take a teacher-scored test to check what you have learned in this unit.

Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 10: UNDOING FUNCTIONS AND MOVING THEM AROUND

LESSON 1: PARENT FUNCTIONS

Study: Parent Functions

Learn about the properties and graphs of linear parent functions, quadratic parent functions, absolute value parent functions, and step functions.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Parent Functions

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: SHIFTING FUNCTIONS

Study: Shifting Functions

Learn about shifting graphs of functions up/down and left/right by changing the coordinates of each ordered pair. Learn about changing the equation of a function to shift its graph vertically or horizontally and about combining vertical and horizontal shifts.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Shifting Functions

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Shifting Functions

Construct arguments and critique the reasoning of others as you write about topics in algebra.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 3: STRETCHING AND COMPRESSING FUNCTIONS

Study: Stretching and Compressing Functions

Learn about stretching or compressing a function's graph by multiplying by a constant, flipping the graph by multiplying by a negative constant, and combining stretches with shifts.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Stretching and Compressing Functions

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Stretching and Compressing Functions
Model and solve a real-world problem.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 4: TRANSFORMATIONS OF PARENT FUNCTIONS

Study: Transformations of Parent Functions
Learn how to perform vertical and horizontal shifts, stretches, and compressions, and any combination of these transformations, on parent functions.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Transformations of Parent Functions
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: UNDOING FUNCTIONS AND MOVING THEM AROUND WRAP-UP

Review: Undoing Functions and Moving Them Around Practice Problems
Check your understanding of the topics in this unit.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Transformation Station
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Undoing Functions and Moving Them Around
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Undoing Functions and Moving Them Around
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 11: DESCRIPTIVE STATISTICS

LESSON 1: MEASURES OF CENTER AND SPREAD

Study: Measures of Center and Spread
Learn how to compute the mean and median of a data set and the effects of outliers on these measures of center. See how to use a calculator to find the standard deviation of a data set, and understand how the standard deviation and the range measure the spread of a data set.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Measures of Center and Spread
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: DOT PLOTS, BOX PLOTS, AND HISTOGRAMS

Study: Dot Plots, Box Plots, and Histograms
Learn how to construct and interpret stem-and-leaf plots, histograms, and dot plots along with comparative stem-and-leaf and dot plots.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Dot Plots, Box Plots, and Histograms
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Dot Plots, Box Plots, and Histograms
Model and solve a real-world problem.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 3: DESCRIBING DISTRIBUTIONS

Study: Describing Distributions
Learn how to describe distributions using measures of center, shape, and spread for single and comparative data sets.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Describing Distributions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Describing Distributions
Construct arguments and critique the reasoning of others as you write about topics in algebra.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 4: TWO-WAY FREQUENCY TABLES

Study: Two-Way Frequency Tables
Learn how to build and use two-way frequency tables and two-way relative frequency tables. Understand how to find and use joint frequencies and marginal frequencies, and how to calculate conditional relative probabilities from a two-way table. Use two-way tables to recognize associations in data.
Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Two-Way Frequency Tables
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: DESCRIPTIVE STATISTICS WRAP-UP

Review: Descriptive Statistics Practice Problems
Check your understanding of the topics in this unit.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Not All Plots Are Suspicious
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Descriptive Statistics
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Descriptive Statistics
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 12: DATA AND MATHEMATICAL MODELING

LESSON 1: TWO-VARIABLE DATA AND SCATTERPLOTS

Study: Two-Variable Data and Scatterplots

Create scatterplots for bivariate data and recognize positive and negative correlations. Use a calculator to find correlation coefficients, and understand what the result says about the strength of the correlation. Know that correlation does not imply causation.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Two-Variable Data and Scatterplots

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: FITTING LINEAR MODELS TO DATA

Study: Fitting Linear Models to Data

Find equations for best-fit lines (regression equations) by estimation and by using a calculator. Use regression equations to make predictions. Find residuals and residual plots and understand how they indicate whether or not a linear model is appropriate.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Fitting Linear Models to Data

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Fitting Linear Models to Data

Model and solve a real-world problem.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 3: NONLINEAR MODELS

Study: Nonlinear Models

Learn how to apply nonlinear regression.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Nonlinear Models

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Nonlinear Models

Construct arguments and critique the reasoning of others as you write about topics in algebra.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 4: DATA AND MATHEMATICAL MODELING WRAP-UP

Review: Data and Mathematical Modeling Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: The Latest Model

Join a three- to five-question discussion to practice methods learned in this unit.

Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Data and Mathematical Modeling

Take a computer-scored test to check what you have learned in this unit.

Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Data and Mathematical Modeling

Take a teacher-scored test to check what you have learned in this unit.

Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 13: SEMESTER 2 EXAM

LESSON 1: SEMESTER 2 REVIEW AND EXAM

Review: Semester 2 Review

Prepare for the final exam by reviewing key concepts and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Exam: Semester 2 Exam

Take a computer-scored exam to demonstrate your mastery of concepts and skills covered in Semester 2.

Duration: 1 hr Scoring: 200 points