Florida's Algebra 1-A and 1-B courses address the need for an expanded, two-year treatment of traditional high school Algebra 1 curriculum. Focusing on review of pre-algebra skills and introductory algebra content, Algebra 1-A allows students to deepen their understanding of real numbers in their various forms and then extend their knowledge to linear equations in one and two variables. Course topics include problem solving; integers; the language of algebra; fractions and decimals; exponents; solving equations with four basic operations; solving equations with roots, powers, or multiple steps; functions; introduction to set theory; and linear equations.

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

Algebra 1-A meets Florida's Next Generation Sunshine State Standards and Benchmarks.

Length: Two semesters

UNIT 1: INTRODUCTION TO PROBLEM SOLVING

LESSON 1: BUILDING BASIC WORD PROBLEMS

Study: Building Basic Word Problems
Learn how to convert number sentences into addition or subtraction word problems. Practice this skill 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 Basic Word Problems
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: A FOUR-STEP APPROACH

Study: A Four-Step Approach
Learn the four steps for solving word problems. Apply the four steps to 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: A Four-Step Approach
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: TOO MUCH OR TOO LITTLE INFORMATION

Study: Too Much or Too Little Information
Learn about determining if there is enough information to solve a given problem, identifying missing information, and separating relevant from irrelevant information. 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: Too Much or Too Little Information

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 4: DRAW A DIAGRAM

Study: Draw a Diagram

Learn what information to include in a diagram of a problem. Practice this skill 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: Draw a Diagram

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 5: USE A MODEL OR ACT IT OUT

Study: Use a Model or Act it Out

Use sample problems to learn when and how to act out a problem or make a model.

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: Use a Model or Act it Out

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 6: MAKE A LIST

Study: Make a List

Learn the steps for making a list in order to solve a word problem. Explore strategies for checking your answers. 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: Make a List

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 7: BUILD A CHART AND FIND A PATTERN

Study: Build a Chart and Find a Pattern

Learn about collecting data in charts, identifying patterns in order to solve word problems, and completing charts in order to answer questions. 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: Build a Chart and Find a Pattern

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 8: GUESS AND CHECK

Study: Guess and Check

Review the four problem solving steps. Learn how to make logical guesses to solve a problem. Solve word problems using this strategy.

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: Guess and Check

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 9: WORK BACKWARD

Study: Work Backward

Learn about starting with a solution and working backward to solve a word problem. Learn how to check your answers by working forward. 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: Work Backward

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 12 points

LESSON 10: INTRODUCTION TO PROBLEM SOLVING WRAP-UP

Review: Introduction to Problem Solving

Check your understanding of the topics in this unit.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Introduction to Problem Solving

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): Introduction to Problem Solving

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

Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Introduction to Problem Solving

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 2: THE LANGUAGE OF ALGEBRA

LESSON 1: WHAT IS A VARIABLE?

Study: What is a Variable?

Learn the definition and explore examples of variables.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: What is a Variable?

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 16 points

LESSON 2: FINDING AND NAMING VARIABLES

Study: Finding and Naming Variables

Select relevant variables and name them.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Finding and Naming Variables

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 16 points

LESSON 3: 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 4: GRAPHS, TABLES, AND EQUATIONS

Study: Graphs, Tables, and Equations

Find the value of a variable using graphs, tables, and equations. Learn to organize information and find patterns. Explore examples and advantages of each problem-solving method.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Graphs, Tables, and Equations

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 16 points

LESSON 5: SOLVING PROBLEMS WITH TABLES AND GRAPHS

Study: Solving Problems with Tables and Graphs

Set up tables and graphs and use them to organize information. Determine when to use tables and graphs to solve problems.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Solving Problems with Tables and Graphs

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 16 points

LESSON 6: VARIABLE EXPRESSIONS

Study: Variable Expressions

Define and form variable expressions by performing operations.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Variable Expressions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 18 points

LESSON 7: SIMPLIFYING AND EVALUATING EXPRESSIONS

Study: Simplifying and Evaluating Expressions

Simplify variable expressions by evaluating their numerical parts. Evaluate variable expressions by substituting values for *x*.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Simplifying and Evaluating Expressions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 12 points

LESSON 8: MATHEMATICAL SENTENCES

Study: Mathematical Sentences

Learn about the types and parts of mathematical sentences. Learn about translating word problems into mathematical sentences.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Mathematical Sentences

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 9: SOLVING MATHEMATICAL SENTENCES

Study: Solving Mathematical Sentences

Solve equations using the "guess-and-check" method. Define a solution set and compare solution sets of equations and inequalities.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Solving Mathematical Sentences

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 15 mins Scoring: 12 points

LESSON 10: SOME GUIDELINES FOR PROBLEM SOLVING

Study: Some Guidelines for Problem Solving

Use problem-solving tips to solve a problem. Develop a general strategy for solving problems.

Duration: 0 hrs 40 mins

Quiz: Some Guidelines for Problem Solving
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

LESSON 11: THE LANGUAGE OF ALGEBRA WRAP-UP

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

Discuss: Using *X* to Mark the Spot
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): The Language of Algebra
Take a computer-scored test to assess what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): The Language of Algebra
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 WITH FOUR BASIC OPERATIONS

LESSON 1: SOLVING EQUATIONS GRAPHICALLY

Study: Solving Equations Graphically
Discover problem-solving strategies including isolating a variable and using tiles to represent values in word problems.
Duration: 0 hrs 30 mins

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

Quiz: Solving Equations Graphically
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 20 mins Scoring: 18 points

LESSON 2: SOLVING EQUATIONS WITH LARGER NUMBERS

Study: Solving Equations with Larger Numbers
Translate English into number sentences and represent equations with a balanced scale.
Duration: 0 hrs 30 mins

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

Quiz: Solving Equations with Larger Numbers
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 20 mins Scoring: 18 points

LESSON 3: SOLVING *X* + *A* = *B*

Study: Solving *x* + *a* = *b*
Practice solving equations in the form $x + a = b$ by isolating the variable x on one side of the equation. Learn how to solve this type of equation when the value of a is positive or negative.
Duration: 0 hrs 30 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 20 mins

Quiz: Solving *x* + *a* = *b*

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: SOLVING WITH A NUMBER LINE

Study: Solving with a Number Line

Plot points on a number line, moving to the left or right to solve equations.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

LESSON 5: SOLVING INEQUALITIES

Study: Solving Inequalities

Develop strategies to solve various forms of inequalities and display their solution set on a number line.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Solving Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 16 points

LESSON 6: SOLVING *AX* = *B*

Study: Solving *ax* = *b*

Learn about setting up a table; writing an equation to express a pattern; isolating a variable; dividing by coefficient of a variable; and using a number line to solve equations in standard form.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Solving *ax* = *b*

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 7: SOLVING *X*/*A* = *B*

Study: Solving *x*/*a* = *b*

Learn about solving division problems using multiplication.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Solving *x*/*a* = *b*

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 8: INEQUALITIES

Study: Inequalities

Learn about solving inequalities by dividing by the coefficient of a variable. Learn about multiplying and dividing inequalities by negative numbers.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 9: VARIATIONS OF EQUATIONS AND INEQUALITIES

Study: Variations of Equations and Inequalities

Explore problems that take different forms, rearranging equations into $x + a = b$ form (standard form) and solving inequalities in nonstandard form.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Variations of Equations and Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 10: SOLVING MULTISTEP LINEAR EQUATIONS

Study: Solving Multistep Linear Equations

Solve multistep equations, including equations that have no solutions, one solution, or an infinite number of solutions. Write and solve 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: Solving Multistep Linear Equations

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

Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Multistep Linear Equations

Model and solve a real-world problem.

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 11: 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 12: SOLVING EQUATIONS WITH FOUR BASIC OPERATIONS WRAP-UP

Review: Solving Equations with Four Basic Operations

Check your understanding of the topics in this unit.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Math — The Ultimate Balancing Act
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): Solving Equations with Four Basic Operations
Take a computer-scored test to assess what you have learned in this unit.
Duration: 0 hrs 50 mins Scoring: 50 points

Test (TS): Solving Equations with Four Basic Operations
Take a teacher-scored test to assess what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 4: FUNCTIONS

LESSON 1: DOMAIN AND RANGE

Study: Domain and Range
Understand the meanings of the domain and range of a function. Use function notation and evaluate a function for a given value in its domain.
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: Domain and Range
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Domain and Range
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: IDENTIFYING FUNCTIONS

Study: Identifying Functions
Determine whether relations represented by graphs or tables of values are functions. Identify the domain and range of a function from an input-output table.
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: Identifying Functions
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: GRAPHS OF FUNCTIONS

Study: Graphs of Functions
Determine the domain and range of a function from its graph. Identify sections where a graph is increasing, decreasing, or remaining constant.
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 Functions
Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

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

LESSON 4: 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 5: FUNCTIONS WRAP-UP

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

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

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

UNIT 5: 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 6: 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 Problems

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

Duration: 0 hrs 20 mins Scoring: 0 points

LESSON 6: USING LOGIC TO SOLVE PROBLEMS WRAP-UP

Review: Using Logic to Solve Problems

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 30 mins

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 7: 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 8: SYSTEMS OF LINEAR EQUATIONS

LESSON 1: TWO-VARIABLE SYSTEMS: GRAPHING

Study: Two-Variable Systems: Graphing
Use graphing to solve two-variable systems of linear equations. Explore what it means for a linear system to have no solution, one solution, or an infinite number of 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: Two-Variable Systems: Graphing
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: TWO-VARIABLE SYSTEMS: SUBSTITUTION

Study: Two-Variable Systems: Substitution
Use substitution to solve two-variable systems of linear equations.
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 Systems: Substitution
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: TWO-VARIABLE SYSTEMS: ELIMINATION

Study: Two-Variable Systems: Elimination
Use elimination to solve two-variable systems of linear equations.
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 Systems: Elimination
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Two-Variable Systems: Elimination
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-VARIABLE SYSTEMS OF INEQUALITIES

Study: Two-Variable Systems of Inequalities
Use graphing to solve two-variable systems of linear inequalities. Use what you know about solving systems of inequalities to solve a real-world problem where there are constraints (limitations) that restrict your options.
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 Systems of Inequalities
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Practice: Modeling: Two-Variable Systems of Inequalities
Model and solve a real-world problem.
Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 5: SYSTEMS OF LINEAR EQUATIONS WRAP-UP

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

Discuss: What's the Solution?
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Systems of 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): Systems of 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 9: EXPONENTS AND EXPONENTIAL FUNCTIONS

LESSON 1: DEFINITIONS AND EXAMPLES OF EXPONENTS

Study: Definitions and Examples of Exponents

Learn the definitions of base exponent power and exponential expression. Learn to use a table to illustrate real-world applications of exponents.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Definitions and Examples of Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: EXPONENTS AND THE ORDER OF OPERATIONS

Study: Exponents and the Order of Operations

Learn about evaluating expressions with exponents using the order of operations.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Exponents and the Order of Operations

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: LAWS OF EXPONENTS

Study: Laws of Exponents

Learn about the multiplication law of exponents with positive and negative exponents; the rule for negative exponents; the division law of exponents; raising products and fractions to a power; and the power rule of exponents.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: The Multiplication Law of Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: SQUARE ROOTS

Study: Square Roots

Learn about fractional exponents; principal square roots; square roots of positive numbers; perfect squares; and negative square roots vs. square roots of negative numbers.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Square Roots

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 5: RADICAL NOTATION

Study: Radical Notation

Learn about radical signs and radicands. Explore laws of exponents that apply to radicals.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Radical Notation

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 6: 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 7: 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 8: 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 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

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

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: SEQUENCES AND FUNCTIONS

LESSON 1: 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 2: 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 3: 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 4: 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 5: SEQUENCES AND FUNCTIONS WRAP-UP

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

Discuss: What's the Difference?
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 40 mins Scoring: 20 points

Test (CS): Sequences 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): Sequences 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 12: SEMESTER 2 EXAM

LESSON 1: SEMESTER 2 REVIEW AND EXAM

Review: Semester 2 Review
Prepare for the semester exam by reviewing key concepts covered in Semester 2.
Duration: 1 hr

Exam: Semester 2 Exam

Exam covering the entire semester

Duration: 0 hrs 50 mins Scoring: 200 points