

Algebra I-A and I-B provide an expanded, two-year course sequence designed for students who are not prepared for the academic challenges of the traditional one-year Algebra I curriculum.

Focusing on review of pre-algebra skills and introductory algebra content, Algebra I-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.

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

This course is built to state standards.

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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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

Checkpoint: 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 11: 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