

Mathematics I builds students' command of geometric knowledge and linear and exponential relationships. Students learn through discovery and application, developing the skills they need to break down complex challenges and demonstrate their knowledge in new situations.

Course topics include relationships between quantities; linear and exponential relationships; reasoning with equations; descriptive statistics; congruence, proof, and constructions; and connecting algebra and geometry through coordinates.

This course supports all students as they develop computational fluency and deepen conceptual understanding. Students begin each lesson by discovering new concepts through guided instruction, and then confirm their understanding in an interactive, feedback-rich environment. Modeling activities equip students with tools for analyzing a variety of real-world scenarios and mathematical ideas. Journaling activities allow students to reason abstractly and quantitatively, construct arguments, critique reasoning, and communicate precisely. Performance tasks prepare students to synthesize their knowledge in novel, real-world scenarios and require that they make sense of multifaceted problems and persevere in solving them.

Length: Two semesters

UNIT 1: SOLVING BASIC EQUATIONS

LESSON 1: TYPES OF NUMBERS

Study: Types of Numbers

Learn about different types of real numbers, including exponents decimals and percents. Compare numbers of different types and formats using a number line.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Types of Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Rational and Irrational Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: VARIABLES AND PROBLEM SOLVING

Study: Variables and Problem Solving

Review what a variable is, and how to form and use variable expressions to solve problems.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Variable Expressions

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Mathematical Sentences

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: SOLVING MATHEMATICAL SENTENCES

Study: Solving Mathematical Sentences

Use the guess-and-check method to solve equations. Define a solution set and compare solution sets of equations and inequalities.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Mathematical Sentences

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: SOME GUIDELINES FOR PROBLEM-SOLVING

Study: Some Guidelines for Problem-Solving

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

Duration: 0 hrs 35 mins Scoring: 0 points

Quiz: Some Guidelines for Problem-Solving

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 5: SOLVING WITH ADDITION AND SUBTRACTION

Study: Solving with Addition and Subtraction

Review how to isolate the variable and solve simple equations and inequalities with addition or subtraction.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Equations with Addition and Subtraction

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Solving Inequalities with Addition and Subtraction

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 6: SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

Study: Solving Equations with Multiplication and Division

Review how to isolate the variable and solve simple equations with multiplication or division.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Equations with Multiplication

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Solving Equations with Division

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 7: SOLVING INEQUALITIES WITH MULTIPLICATION AND DIVISION

Study: Solving Inequalities with Multiplication and Division

Review how to isolate the variable and solve simple inequalities with multiplication or division.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Inequalities with Multiplication and Division

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 8: SOLVING WITH ROOTS AND POWERS

Study: Solving with Roots and Powers

Learn how to solve equations with roots and powers.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving with Roots and Powers

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Solving Inequalities with Roots and Powers

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Finding Solution Sets with Inequalities

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 9: SOLVING MULTISTEP LINEAR EQUATIONS

Study: Solving Multistep Linear Equations

Review the strategy for isolating variables in multistep equations. Explore equations that have zero, one, or infinite solutions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Basic Collecting of Like Terms

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Advanced Collecting of Like Terms

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Finding Number of Solution Sets

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Multistep Linear Equations

Use tools to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 10: SOLVING LITERAL EQUATIONS AND FORMULAS

Study: Solving Literal Equations and Formulas

Learn how to solve literal equations for one variable.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Literal Equations and Formulas

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

Duration: 0 hrs 20 mins Scoring: 20 points

Journal: Solving Literal Equations and Formulas

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

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 11: PERFORMANCE TASK: PROBLEM SOLVING WITH EQUATIONS

Study: Problem Solving with Equations

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

Duration: 0 hrs 35 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: 120 points

LESSON 12: SOLVING BASIC EQUATIONS WRAP-UP

Checkup: Solving Basic Equations Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Solving Basic Equations

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Solving Basic Equations

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

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Solving Basic Equations

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 2: MEASUREMENT

LESSON 1: CONVERTING UNITS

Study: Converting Units

Learn how to use a special case of multiplication by 1 to cancel out units and change one unit of measurement to another.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Canceling Units

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Converting Units

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

Duration: 0 hrs 20 mins Scoring: 20 points

Journal: Converting Units

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

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 2: ESTIMATION AND SCALE**Study: Estimation and Scale**

Learn about the scale of numbers, order of magnitude, powers of 10, and Fermi problems.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Estimation and Scale

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: PRECISION IN MEASUREMENT**Study: Precision in Measurement**

Explore the ideas of precision and accuracy in measurement. Define, locate, and practice using significant figures in addition, subtraction, multiplication, and division problems.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Precision and Accuracy

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Significant Figures

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Precision in Measurement

Use tools to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 4: MEASUREMENT WRAP-UP

Checkpoint: Measurement Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Measurement

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Measurement

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

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Measurement

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 3: FUNCTIONS

LESSON 1: WHEN ONE THING DEPENDS ON ANOTHER

Study: When One Thing Depends on Another

Learn the definition of a function and explore examples of functions in the world around you.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: When One Thing Depends on Another

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: FUNCTION NOTATION

Study: Function Notation

Use variables to name functions, and learn about a special type of language called function notation.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Translating to Function Notation

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Function Notation for Specific Amounts

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Naming Functions

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: INPUT-OUTPUT MACHINES

Study: Input-Output Machines

Learn how to describe functions by their domain and range. Work with input-output diagrams.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Using Functions

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: DOMAIN AND RANGE

Study: Domain and Range

Learn about mapping diagrams, locating domain and range on mapping diagram and estimating the domain and range of functions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: 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 20 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 30 mins Scoring: 20 points

LESSON 5: FUNCTIONS AND TABLES

Study: Functions and Tables

Learn to use input-output tables to describe and define functions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Functions and Tables

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 6: FUNCTIONS AND GRAPHS

Study: Functions and Graphs

Learn to identify the domain and range of a function from ordered pairs and the graph of a function. Use the vertical line test to evaluate functions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Graphs, Domain, and Range

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Functions and Relations

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 7: LINEAR AND NONLINEAR FUNCTIONS

Study: Linear and Nonlinear Functions

Learn about linear and nonlinear functions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Linear and Nonlinear Functions

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 8: LINEAR AND EXPONENTIAL GROWTH

Study: Linear and Exponential Growth

Learn to identify the graphs of linear and nonlinear functions, use the horizontal line test to evaluate functions, and explore special functions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Linear and Exponential Growth

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Linear and Exponential Growth

Use tools to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 9: FUNCTIONS AND FORMULAS

Study: Functions and Formulas

Learn to use an algebraic rule or formula to describe and define functions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Functions and Formulas

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

Duration: 0 hrs 20 mins Scoring: 20 points

Study: Solving the Profit Problem

Use what you know about functions, as well as information given in tables, graphs, and formulas, to solve a business problem.

Duration: 0 hrs 35 mins Scoring: 0 points

LESSON 10: ARITHMETIC OF FUNCTIONS

Study: Arithmetic of Functions

Learn how to add, subtract, multiply, divide, and compose functions.

Duration: 0 hrs 35 mins

Checkup: Lessons Learned

Complete a set of practice problems on the arithmetic of functions.

Duration: 0 hrs 25 mins

Quiz: Arithmetic of Functions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 11: FUNCTIONS WRAP-UP

Checkup: Functions Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Functions

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Functions

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

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Functions

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 4: LINEAR EQUATIONS

LESSON 1: PATTERNS AND LINES

Study: Patterns and Lines

Learn about a type of relationship in functions called direct variation. Explore the connection between the equation of a line and points on its graph. Find the equation of a line by looking at the coordinates of its points. Graph a line using a chart of its solutions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Finding Equations of Lines as Solutions

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: SLOPE

Study: Slope

Learn how to find the slope of a line, define rise and run, and measure rates of change.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Finding Slopes of Lines

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Positive, Negative, and Undefined Slopes

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

Duration: 0 hrs 20 mins Scoring: 20 points

Journal: Slope

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

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 3: SLOPE-INTERCEPT EQUATION OF A LINE

Study: Slope-Intercept Equation of a Line

Learn to use slope and the y -intercept of a given line to find its slope-intercept equation.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Finding Slope-Intercept Equations of Lines

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Slope-Intercept Equation of a Line

Use tools to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 4: GRAPHING AND MANIPULATING $y = mx + b$

Study: Graphing and Manipulating $y = mx + b$

Practice graphing and manipulating linear equations in the form $y = mx + b$.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Graphing and Manipulating $y = mx + b$

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 5: POINT-SLOPE EQUATION OF A LINE

Study: Point-Slope Equation of a Line

Learn how to find the y -intercept of a line when given its slope and another point on the line. Learn about the point-slope equation of a line and the standard form of an equation.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Finding the Point-Slope Equation

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Finding the Equations of Lines

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 6: PARALLEL AND PERPENDICULAR LINES

Study: Parallel and Perpendicular Lines

Learn about parallel and perpendicular lines and the relationships between their slopes.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Slopes of Parallel and Perpendicular Lines

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 7: LINEAR INEQUALITIES

Study: Linear Inequalities

Learn how to find and graph solution sets for linear inequalities.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Graphs of Inequalities

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

Duration: 0 hrs 20 mins Scoring: 20 points

Study: Solving the Lighting Problem

Learn how to use linear inequalities to solve a real-world problem about the best use of energy to light a building.

Duration: 0 hrs 35 mins Scoring: 0 points

LESSON 8: LINEAR EQUATIONS WRAP-UP

Checkpoint: Linear Equations Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Linear Equations

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Linear Equations

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

Duration: 0 hrs 40 mins Scoring: 56 points

Test (TS): Linear Equations

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 5: SYSTEMS OF LINEAR EQUATIONS

LESSON 1: TWO-VARIABLE SYSTEMS: GRAPHING

Study: Two-Variable Systems: Graphing

Learn how to use graphing to solve two-variable systems of linear equations. Explore what it means to have zero, one, or infinite

solutions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving with Graphing

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: TWO-VARIABLE SYSTEMS: SUBSTITUTION

Study: Two-Variable Systems: Substitution

Learn how to use substitution to solve two-variable systems of linear equations.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving with Substitution

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: TWO-VARIABLE SYSTEMS: ELIMINATION

Study: Two-Variable Systems: Elimination

Learn how to use elimination to solve two-variable systems of linear equations.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving with Elimination -- Standard Form

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Solving with Elimination -- Nonstandard Form

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

Duration: 0 hrs 20 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 30 mins Scoring: 20 points

LESSON 4: TWO-VARIABLE SYSTEMS: MATRICES

Study: Two-Variable Systems: Matrices

Learn how to set up and use a matrix to solve two-variable systems of linear equations.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Reading and Using Matrices

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Solving with a Matrix

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 5: TWO-VARIABLE SYSTEMS OF INEQUALITIES

Study: Two-Variable Systems of Inequalities

Learn how to use graphing to solve two-variable systems of linear inequalities. Use what you know about solving systems of inequalities to solve a real-world farming problem.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Systems of Inequalities

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Solving Systems with More Than Two Inequalities

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Solving Systems with More Than Two Inequalities

Use tools to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 6: SYSTEMS OF LINEAR EQUATIONS WRAP-UP

Checkup: Systems of Linear Equations Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Systems of Linear Equations

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Systems of Linear Equations

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

Duration: 0 hrs 40 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 30 mins Scoring: 50 points

UNIT 6: DESCRIPTIVE STATISTICS

LESSON 1: NUMERICAL DATA

Study: Numerical Data

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 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Numerical Data

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Numerical Data

Use tools to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 2: MEASURES OF CENTER

Study: Measures of Center

Learn how to calculate and interpret measures of center, such as mean, median, and mode.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Measures of Center

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: MEASURES OF SPREAD

Study: Measures of Spread

Learn how to calculate and interpret variance, standard deviation, range, interquartile range, and outliers.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Measures of Spread

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: BOX PLOTS

Study: Box Plots

Learn how to calculate and interpret box plots, comparative box plots, and modified box plots.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Box Plots

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 5: 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 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Complete a set of practice problems to 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 20 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 30 mins Scoring: 20 points

LESSON 6: TWO-VARIABLE DATA**Study: Two-Variable Data**

Investigate two-variable data sets through concepts such as explanatory and response variables, scatterplot correlation, least squares regression, and residuals.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Complete a set of practice problems to check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Scatterplots and Correlation

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Least Squares Regression

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

Duration: 0 hrs 20 mins Scoring: 20 points

Study: Least Squares Regression Lines

Investigate two-variable data concepts such as scatterplots, least squares regression lines, best-fit lines, and residuals.

Duration: 0 hrs 35 mins Scoring: 0 points

Study: Reading the Headlines

Take a closer look at news headlines for claims of correlation and causation.

Duration: 0 hrs 35 mins Scoring: 0 points

LESSON 7: DESCRIPTIVE STATISTICS WRAP-UP**Checkpoint: Descriptive Statistics Practice Problems**

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Descriptive Statistics

Prepare for the unit test by reviewing key concepts and skills.

Duration: 0 hrs 20 mins Scoring: 0 points

Test (CS): Descriptive Statistics

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

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Descriptive Statistics

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 7: MATHEMATICS I SEMESTER 1 EXAM

LESSON 1: MATHEMATICS I SEMESTER 1 EXAM

Review: Mathematics I Semester 1

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

Duration: n/a Scoring: 0 points

Exam: Mathematics I Semester 1

Take a computer-scored exam to demonstrate your mastery of concepts and skills covered in Mathematics I Semester 1.

Duration: 0 hrs 50 mins Scoring: 200 points

UNIT 8: EXPONENTS AND EXPONENTIAL FUNCTIONS

LESSON 1: EXPONENTS

Study: Exponents

Review exponents and their place in the order of operations. Learn ways to evaluate exponential expressions. Learn about fractional and decimal exponents, radical notation, square roots, and scientific notation.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Exponential Expressions

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Operations with Radicals

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: EXPONENTIAL FUNCTIONS

Study: Exponential Functions

Define the standard form of an exponential function and explore a variety of its applications, such as exponential growth and decay (in the forms of doubling time and half-life), as well as compound interest. Compare compound interest to continuously compounded interest using the irrational number e .

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Evaluating Exponential Functions

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Calculating Exponential Growth

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: EXAMPLES AND APPLICATIONS OF EXPONENTIAL FUNCTIONS

Study: Examples and Applications of Exponential Functions

Explore case studies in exponential growth and decay and logarithmic growth.

Duration: 0 hrs 35 mins Scoring: 0 points

Practice: Modeling: Examples and Applications of Exponential Functions

Use tools to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 4: GRAPHS OF EXPONENTIAL FUNCTIONS

Study: Graphs of Exponential Functions

Learn about the shape of graphs of exponential functions with various bases and about finding the domain and range of exponential functions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to 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 20 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 30 mins Scoring: 20 points

LESSON 5: LINEAR AND EXPONENTIAL MODELS

Study: Linear and Exponential Models

Learn how to use linear and exponential equations as models.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to check your understanding of the lesson

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Linear and Exponential Models

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 6: EXPONENTS AND EXPONENTIAL FUNCTIONS WRAP-UP

Checkup: Exponents and Exponential Functions Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Exponents and Exponential Functions

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Exponents and Exponential Functions

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

Duration: 0 hrs 40 mins Scoring: 56 points

Test (TS): Exponents and Exponential Functions

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 9: SEQUENCES AND FUNCTIONS

LESSON 1: FINDING PATTERNS

Study: Finding Patterns

Learn about image, letter, and number patterns, and about finding the next term.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Finding Patterns

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Letter and Number Patterns

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: ARITHMETIC SEQUENCES**Study: Arithmetic Sequences**

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

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to 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 20 mins Scoring: 20 points

Quiz: Rules for Arithmetic Sequences

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

Duration: 0 hrs 20 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 30 mins Scoring: 20 points

LESSON 3: 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.

Explore the graphs of geometric sequences as exponential curves.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to 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 20 mins Scoring: 20 points

Quiz: Formulas for Geometric Sequences

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Geometric Sequences

Use tools to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 4: APPLICATIONS OF NUMBER SEQUENCES

Study: Applications of Number Sequences

Learn about applications and models of arithmetic, geometric, and special sequences.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Complete a set of practice problems to check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Applications of Arithmetic Sequences

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Applications of Geometric Sequences

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Applications of Other Sequences

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

Duration: 0 hrs 20 mins Scoring: 20 points

Study: Simple and Compound Interest

Learn about simple and compound interest.

Duration: 0 hrs 35 mins Scoring: 0 points

LESSON 5: SEQUENCES AND FUNCTIONS WRAP-UP

Checkup: Sequences and Functions Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Sequences and Functions

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Sequences and Functions

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

Duration: 0 hrs 40 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 30 mins Scoring: 50 points

UNIT 10: FOUNDATIONS OF GEOMETRY

LESSON 1: INDUCTION: THE SEARCH FOR RULES AND PATTERNS

Study: Induction: The Search for Rules and Patterns

Learn about looking for patterns, making conjectures, cross-referencing to history and science, real-world examples of inductive reasoning, building a triangle, and examples of symmetry.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Induction: The Search for Rules and Patterns

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: DEDUCTION: MAKING A CASE

Study: Deduction: Making a Case

Learn about the definition of deductive reasoning; postulates and conditional statements; and using deductive reasoning in proofs. Explore a real-world example of deducing that deals with the combination of a lock.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Deduction: Making a Case

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: THE LOOK AND LANGUAGE OF LOGIC

Study: The Look and Language of Logic

Explore examples of geometric reasoning. Learn about converses, inverses, and contrapositives of conditional statements.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: The Look and Language of Logic

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: INTRODUCTION TO PROOFS

Study: Introduction to Proofs

Learn about postulates and axioms, givens, proof by contradiction (indirect proof), theorems and corollaries, and the axiomatic method.

Duration: 0 hrs 35 mins Scoring: 0 points

Quiz: Introduction to Proofs

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 5: BASIC POSTULATES IN GEOMETRY

Study: Basic Postulates in Geometry

Learn about the relationship of rays, lines, and angles to direction; the definition of a line; notation for rays and lines; building and defining an angle (including its vertex and sides); conventions for naming angles; and straight and zero angles.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Basic Postulates in Geometry

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 6: PLANES AND THE SPACE OF GEOMETRY

Study: Planes and the Space of Geometry

Learn about dimensionality, collinear points, two-dimensional objects, the geometric plane, the flat plane, postulate coplanar objects, and three-dimensional objects (solids).

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Planes and the Space of Geometry

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Logo Design

Use your knowledge of location, direction, and angles to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 7: INTERSECTING LINES AND PROOFS

Study: Intersecting Lines and Proofs

Learn about intersections that form vertical angles; the vertical angle theorem; perpendicular lines, rays, and segments; distance and length; and perpendicular bisectors.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems and Proofs

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Intersecting Lines and Proofs

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 8: PARALLEL LINES AND PROOFS

Study: Parallel Lines and Proofs

Learn about skew lines, coplanar lines that do not intersect, parallel line notation, transversals and corresponding angles, alternate interior angles, consecutive interior angles, and parallel line theorems.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Parallel Lines and Proofs

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

Duration: 0 hrs 20 mins Scoring: 20 points

Journal: Consecutive Angle Theorem

Use what you know about lines and angles to critique the reasoning of others and prove a theorem.

Duration: 0 hrs 30 mins Scoring: 20 points

Study: Solving the Mirror Problem

Learn about applying theorems from this unit to the problem of measuring light reflected off a mirror. Learn about the law of reflection.

Duration: 0 hrs 35 mins Scoring: 0 points

LESSON 9: FOUNDATIONS OF GEOMETRY WRAP-UP

Checkpoint: Foundations of Geometry Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Foundations of Geometry

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Foundations of Geometry

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

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Foundations of Geometry

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 11: TRIANGLES

LESSON 1: WHAT IS A TRIANGLE?

Study: What Is a Triangle?

Learn about the definition and parts of a triangle; opposite and included figures; naming and sorting triangles; equilateral, isosceles, and scalene triangles; and the triangle inequality theorem.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Naming Triangles by Angle Measures

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Naming Triangles by Side Lengths

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: The Triangle Inequality Theorem

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: THE ANGLES OF A TRIANGLE

Study: The Angles of a Triangle

Explore the angle sum theorem and third angle theorem for triangles. Investigate the relationship between a given triangle's vertex and its exterior and remote interior angles.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Angle Theorems

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Exterior and Remote Interior Angles

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: CONGRUENCE

Study: Congruence

Learn about congruence, transformations of triangles, corresponding triangles, notation for writing congruence statements, and the CPCTC triangle congruence theorem.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Congruent Triangles

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Properties of Congruence

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: CONGRUENCE POSTULATES

Study: Congruence Postulates

Learn about postulates including the SSS, SAS, ASA, and AAS theorems.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Using Congruence Postulates

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: The AAS Theorem

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 5: SIMILAR TRIANGLES

Study: Similar Triangles

Learn about similarity versus congruence, testing for similarity among triangles, proportionality, the definition of similar triangles, and scale factor.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Similar Triangles

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

LESSON 6: SIMILARITY THEOREMS AND PROPORTIONAL REASONING

Study: Similarity Theorems and Proportional Reasoning

Learn about the ASA similarity postulate, the SSS similarity theorem, and the SAS similarity theorem.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Similarity Theorems

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Similarity Theorems

Use your knowledge of similarity to model and solve a real-world problem.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 7: PERFORMANCE TASK: THE PARALLAX PROBLEM

Study: The Parallax Problem

Learn to apply the concepts of congruence, similarity, ratio, and proportion to the solution of a real-world parallax problem.

Duration: 0 hrs 35 mins Scoring: 0 points

Project: Performance Task: The Parallax Problem

Apply the concepts of congruence, similarity, ratio, and proportion to solve a real-world problem.

Duration: 2 hrs Scoring: 120 points

LESSON 8: TRIANGLES WRAP-UP

Checkup: Triangles Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Triangles

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Triangles

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

Duration: 0 hrs 40 mins Scoring: 38 points

Test (TS): Triangles

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 12: COORDINATE GEOMETRY

LESSON 1: MIDPOINT FORMULA

Study: Midpoint Formula

Learn about the midpoints of horizontal, vertical, and diagonal line segments and about the midpoint formula. Complete a sample problem.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Midpoint Formula

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: THE DISTANCE FORMULA

Study: The Distance Formula

Derive the distance formula from the Pythagorean theorem. Use this formula to calculate the distance between any two points. Apply the distance formula in a real-world problem that involves locating the shortest route on a nautical map.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: The Distance Formula

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

Duration: 0 hrs 20 mins Scoring: 20 points

Journal: The Distance Formula

Use what you know about the midpoint and distance formulas to critique the reasoning of others.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 3: PATTERNS AND LINES

Study: Patterns and Lines

Learn about linear equations, ordered pairs, and data points that form a straight line.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Patterns and Lines

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: SLOPE

Study: Slope

Learn about measuring slope, rise, and run; the slope formula; negative zero and undefined slope; and measuring the rate of change of a dependent variable.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Computing Slope

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: The Rescue Ship

Use your knowledge of parallel lines and the slope formula to steer a ship through dangerous waters.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 5: EQUATIONS OF LINES

Study: Equations of Lines

Learn about and explore examples of properties of lines, the y -intercept, the slope-intercept equation, and the point-slope equation.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Equations of Lines — Part I

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Equations of Lines — Part II

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 6: EQUATIONS OF PARALLEL AND PERPENDICULAR LINES AND PROOFS

Study: Equations of Parallel and Perpendicular Lines and Proofs

Learn about the definitions and slopes of parallel and perpendicular lines. Learn about negative reciprocals.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Equations of Parallel and Perpendicular Lines and Proofs

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 7: COORDINATE GEOMETRY WITH POLYGONS

Study: Coordinate Geometry with Polygons

Investigate the properties of polygons using coordinate geometry and congruence transformations on the coordinate plane.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Coordinate Geometry with Polygons

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 8: AREA OF A TRIANGLE WITH COORDINATE GEOMETRY

Study: Area of a Triangle with Coordinate Geometry

Learn about the area of a polygon, square units, and the triangle area formula and theorem.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Area of a Triangle

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

LESSON 9: AREA AND PERIMETER OF POLYGONS WITH COORDINATE GEOMETRY

Study: Area and Perimeter of Polygons with Coordinate Geometry

Find the perimeter of any polygon. Determine the areas of irregular polygons by breaking them up into quadrilaterals and regular polygons. Use the apothem formula to find the area of a regular polygon. Complete sample problems about the area of irregular polygons.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Area and Perimeter of Polygons

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 10: COORDINATE GEOMETRY WRAP-UP

Checkup: Coordinate Geometry Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Coordinate Geometry

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Coordinate Geometry

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

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Coordinate Geometry

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 13: CONSTRUCTIONS AND TRANSFORMATIONS

LESSON 1: CONSTRUCTIONS

Study: Constructions

Learn about using a straightedge and a compass, common notions of Euclidean geometry, five postulates, constructing an equilateral triangle and a regular hexagon, bisecting an angle, and constructing a perpendicular bisector.

Duration: 0 hrs 35 mins Scoring: 0 points

Quiz: Constructions

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

Duration: 0 hrs 20 mins Scoring: 20 points

Practice: Modeling: Constructing a Square

Use your geometry skills to construct a square using only a straightedge and a compass.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 2: PAPER FOLDING

Study: Paper Folding

Learn about constructing geometric solids with folding paper, coinciding objects bisecting an angle, and constructing a parallel line segment.

Duration: 0 hrs 35 mins Scoring: 0 points

Quiz: Paper Folding

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: IMPOSSIBLE PROBLEMS FROM ANTIQUITY

Study: Impossible Problems from Antiquity

Learn about the Delian problem (doubling a cube) and trisecting an angle.

Duration: 0 hrs 35 mins Scoring: 0 points

Quiz: Impossible Problems from Antiquity

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: TRANSFORMATIONS

Study: Transformations

Learn about rigid motions, describe the image and preimage, predict the results of transformations, and use series of transformations to move figures onto themselves.

Duration: 0 hrs 35 mins Scoring: 0 points

Quiz: Transformations

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

Duration: 0 hrs 20 mins Scoring: 20 points

Journal: Transformations

Critique a conjecture about a series of transformations.

Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 5: SYMMETRY

Study: Symmetry

Learn about reflectional symmetry and line of symmetry and explore an example of an isosceles triangle. Learn about rotational symmetry, point of symmetry, and the symmetry of a human face.

Duration: 0 hrs 35 mins Scoring: 0 points

Quiz: Symmetry

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 6: TESSELLATIONS

Study: Tessellations

Learn the definition and explore examples of tessellations. Discover the chessboard as an example of a regular tessellation. Learn about semiregular tessellations.

Duration: 0 hrs 35 mins Scoring: 0 points

Quiz: Tessellations

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 7: CONSTRUCTIONS AND TRANSFORMATIONS WRAP-UP

Checkup: Constructions and Transformations Practice Problems

Check your understanding of the topics in this unit.

Duration: 0 hrs 25 mins Scoring: 0 points

Review: Constructions and Transformations

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): Constructions and Transformations

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

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Constructions and Transformations

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

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 14: MATHEMATICS I SEMESTER 2 EXAM

LESSON 1: MATHEMATICS I SEMESTER 2 EXAM

Review: Mathematics I Semester 2

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

Duration: n/a Scoring: 0 points

Exam: Mathematics I Semester 2

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

Duration: 0 hrs 50 mins Scoring: 200 points