

Algebra I is a comprehensive course that provides an in-depth exploration of key algebraic concepts. Through a "Discovery-Confirmation-Practice"-based exploration of these concepts, students are challenged to work toward a mastery of computational skills, to deepen their understanding of key ideas and solution strategies, and to extend their knowledge in a variety of problem-solving applications.

Course topics include an Introductory Algebra review; measurement; an introduction to functions; problem solving with functions; graphing; linear equations and systems of linear equations; polynomials and factoring; and data analysis and probability.

Within each Algebra I lesson, students are supplied with a post-study Checkup activity that provides them the opportunity to hone their computational skills in a low-stakes, 10-question problem set before moving on to a formal assessment. Additionally, many Algebra I lessons include interactive-tool-based exercises and math explorations to further connect lesson concepts to a variety of real-world contexts.

To assist students for whom language presents a barrier to learning, this course includes audio resources in both Spanish and English.

The content is based on the National Council of Teachers of Mathematics (NCTM) standards and is aligned with state standards.

Length: Two Semesters

UNIT 1: REVIEW OF INTRODUCTORY ALGEBRA

LESSON 1: INTEGERS AND OPERATIONS

Study: Integers and Operations

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

Duration: 0 hr 50 min

Explore: The Creation of Numbers

Explore a brief history of the development of number systems in various cultures.

Duration: 0 hr 20 min

Explore: Numeric Systems

Discover examples of other cultures' numeric systems, such as Hindu, Roman, Arabic, Mayan, and Egyptian.

Duration: 0 hr 20 min

Explore: Codes

Discover examples of codes in everyday life, such as zip codes, telephone numbers, and computer passwords. Learn about the basis of codes as number sequences and about how cryptology protects privacy.

*Duration: 0
hr 20 min*

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Properties of Operations

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 25 min Scoring:
28 points*

Quiz: Order of Operations

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 25 min Scoring: 18
points*

LESSON 2: FRACTIONS AND DECIMALS

Study: Fractions and Decimals

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

Duration: 0 hr 50 min

Explore: Reading and Writing Music

Discover how musicians read music using the mathematical tools of measures, beats, notes, and meter.

Duration: 0 hr 20 min

Explore: TV Ratings

Explore an overview of the Nielsen rating system, addressing methods and limits of statistical research and analysis. Explore the concepts of sampling, ratings vs. shares, and extrapolating data.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Like Denominators

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16

points

Quiz: Equivalent Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 18

points

Quiz: Fractions, Decimals, and Percents

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 28 points

LESSON 3: EXPONENTS

Study: Exponents

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

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Exponential Expressions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

Quiz: Operations with Radicals

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 16 points

Quiz: Scientific Notation

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 24

points

LESSON 4: VARIABLES AND PROBLEM SOLVING

Study: Variables and Problem Solving

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

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Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Variables and Problem Solving

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 28 points

LESSON 5: SOLVING WITH ADDITION AND SUBTRACTION

Study: Solving with Addition and Subtraction

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

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Practice: Number Line Tool

Use algebra and a number line tool to solve equations.

Duration: 1 hr Scoring: 25 points

Quiz: Solving Equations with Addition and Subtraction

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16 points

Quiz: Solving Inequalities with Addition and Subtraction

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16 points

LESSON 6: SOLVING WITH MULTIPLICATION AND DIVISION

Study: Solving with Multiplication and Division

Review solving equations involving multiplication, including by using a number line; solving equations involving division, including by using a number line; and solving inequalities with multiplication and division.

Duration: 0 hr 50 min

Explore: Money

Explore what determines the value of money — supply and demand, inflation and deflation, and rates of international currency exchange.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Practice: Number Line Tool

Use algebra and a number line tool to solve equations.

Duration: 1 hr Scoring: 25 points

Quiz: Solving Equations with Multiplication

Take a quiz to assess your understanding of the material.

Duration: 0 hr

25 min Scoring: 16 points

Quiz: Solving Equations with Division

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 16 points

Quiz: Solving Inequalities with Multiplication and Division

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 22 points

LESSON 7: SOLVING WITH ROOTS AND POWERS**Study: Solving with Roots and Powers**

Review solving equations with square roots and absolute values. Review solving inequalities with square roots and absolute values, including by using a number line.

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Solving with Roots and Powers

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 16 points

Quiz: Solving Inequalities with Roots and Powers

Take a quiz to assess your understanding of the material.

Duration:

0 hr 25 min Scoring: 16 points

Quiz: Finding Solution Sets with Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hr

25 min Scoring: 16 points

LESSON 8: SOLVING MULTISTEP LINEAR EQUATIONS

Study: Solving Multistep Linear Equations

Review collecting like terms, using both addition/subtraction and multiplication/division and identifying equations that are never or always true.

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Basic Collecting of Like Terms

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 16 points

Quiz: Advanced Collecting of Like Terms

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 16 points

Quiz: Finding Number of Solution Sets

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 16 points

LESSON 9: WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercises

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 1 hr

Discuss: When Does a Number Become Scientific?

Take part in a discussion about applying methods learned in this unit.

Duration: 0 hr 20 min Scoring: 30 points

Test (CS): Review of Introductory Algebra

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

Duration: 0 hr 40 min Scoring: 105 points

Test (TS): Review of Introductory Algebra

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

Duration: 0 hr 30 min Scoring: 50 points

LESSON 10: DIAGNOSTIC

Diagnostic: Review of Introductory Algebra

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hr 40 min Scoring: 35 points

UNIT 2: MEASUREMENT

LESSON 1: METRIC AND CUSTOMARY UNITS

Project: Operation Metrication

Research a movement to bring the metric system to the United States.

Duration: 3 hr

Scoring: 10 points

Study: Metric and Customary Units

Explore the history of measurement in the forms of the metric system and the British/US System of Units. Create derived units from more basic components, such as ?kilometers per hour.?

Duration: 0

hr 50 min

Study: Flash Cards

Explore number systems, including the history of those of the Roman, Babylonian, Egyptian, and Chinese cultures.

Duration: 0 hr 10 min

Checkup: Practice Problems

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

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Duration: 0 hr 30 min

Quiz: Customary Units

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16 points

Quiz: Metric System

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16 points

LESSON 2: CONVERTING UNITS

Study: Converting Units

Learn about converting between units from different systems, multiplication by one unit, and canceling.

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Canceling Units

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 30 points

Quiz: Converting Units

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 30 points

LESSON 3: ESTIMATION AND SCALE

Study: Estimation and Scale

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

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Estimation and Scale

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 30

points

LESSON 4: PRECISION IN MEASUREMENT

Study: Precision in Measurement

Learn about precision, accuracy, significant figures, multiplication, and addition.

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Precision and Accuracy

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

30 points

Quiz: Significant Figures

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 30

points

LESSON 5: APPLICATIONS OF MEASUREMENT

Study: Applications of Measurement

Learn about applications of units, unit conversions, estimation and scale, order of magnitude, precision, accuracy, and significant figures.

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Applications of Measurement

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

LESSON 6: WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercises

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 1 hr

Discuss: To Convert or Not to Convert ...

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

Duration: 0 hr 20 min Scoring: 30 points

Project: Operation Metrication Reflections

Complete your measurement project and analyze the results.

Duration: 3 hr

Scoring: 40 points

Test (CS): Measurement

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

Duration: 0 hr 40

min Scoring: 75 points

Test (TS): Measurement

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

Duration: 0 hr 30 min

Scoring: 50 points

LESSON 7: DIAGNOSTIC**Diagnostic: Measurement**

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration:

0 hr 40 min Scoring: 25 points

UNIT 3: WHAT IS A FUNCTION?

LESSON 1: WHEN ONE THING DEPENDS ON ANOTHER**Study: When One Thing Depends on Another**

Learn the definition and explore examples of functions as quantities that depend on other quantities.

Duration: 0 hr 50 min

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Explore: Fall Foliage

Consider seasonal changes in the length of daylight as a functional relationship of time of year.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: When One Thing Depends on Another

Take a quiz to assess your understanding of the material.

Duration: 0 hr

25 min Scoring: 28 points

LESSON 2: FUNCTION NOTATION

Study: Function Notation

Learn about and explore examples of function notation.

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Translating to Function Notation

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 16 points

Quiz: Function Notation for Specific Amounts

Take a quiz to assess your understanding of the material.

Duration: 0 hr

25 min Scoring: 16 points

Quiz: Naming Functions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16

points

LESSON 3: INPUT-OUTPUT MACHINES

Study: Input-Output Machines

Learn about the domain and range of functions, input-output diagrams using rules for functions, and mathematical expressions in functions.

Duration: 0 hr 50 min

Explore: Codes and Ciphers

Explore the difference between codes and ciphers and learn about various types of ciphers.

Duration: 0 hr 20 min

Explore: Codes through History

Explore examples of codes used throughout history.

Duration: 0 hr 20 min

Explore: Calculating Machines

Discover examples of calculating machines used in the past, such as the abacus, the circular slide rule, Blaise Pascal's machine, Thomas de Colmar's arithmometer, and Charles Babbage's Difference Engine.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Using Functions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 28

points

LESSON 4: WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercise

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 1 hr

Discuss: Real-World Input/Output Machines

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

Duration: 0 hr 20 min Scoring: 30 points

Test (CS): What Is a Function?

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

Duration: 0 hr

40 min Scoring: 45 points

Test (TS): What Is a Function?

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

Duration: 0 hr

30 min Scoring: 50 points

LESSON 5: DIAGNOSTIC

Diagnostic: What Is a Function?

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hr 40 min Scoring: 15 points

UNIT 4: SOLVING PROBLEMS WITH FUNCTIONS

LESSON 1: FUNCTIONS AND TABLES

Study: Functions and Tables

Learn about using input-output tables to define or describe functions, estimating values of functions, and finding a function's rule from a table.

Duration: 0 hr 50 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Functions and Tables

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20

points

LESSON 2: FUNCTIONS AND GRAPHS

Study: Functions and Graphs

Learn about using bar graphs, pie charts, and line graphs to describe or define functions.

Duration: 0 hr 50 min

Explore: The Stock Market

Discover aspects of the U.S. stock market, including macroeconomic basics, corporate structure and finance, publicly and privately held companies, dividends and shares, investing, and reading stock market data and performance trends.

Duration: 0 hr 20 min

Explore: U.S. Census

Explore aspects of the U.S. Census, including types of data collected; methods such as probability, sampling, and compiling information; and how the U.S. government uses census data to plan, manage, and evaluate federal programs.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Functions and Graphs

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

18 points

LESSON 3: FUNCTIONS AND FORMULAS

Study: Functions and Formulas

Learn about using algebraic rules and formulas to describe and define functions.

Duration: 0 hr 50 min

Explore: Bode's Law

Learn about the application of sequential analysis to physics problems like varying distances of planets from the sun.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Functions and Formulas

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

16 points

Study: Solving the Profit Problem

In a real-world application, use tables, rules, and the method of estimating values to write an equation that expresses a function. Solve the equation and express the output in a line graph.

Duration: 0 hr 50

min

LESSON 4: WRAP-UP

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Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercise

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 1 hr

Discuss: Presenting Info the Best Way Possible

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

Duration: 0 hr 20 min Scoring: 30 points

Test (CS): Solving Problems with Functions

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

Duration: 0 hr 40 min Scoring: 51 points

Test (TS): Solving Problems with Functions

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

Duration: 0 hr 30 min Scoring: 50 points

LESSON 5: DIAGNOSTIC**Diagnostic: Solving Problems with Functions**

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hr 40 min Scoring: 17 points

UNIT 5: GRAPHING DATA

LESSON 1: THE CARTESIAN COORDINATE SYSTEM**Study: The Cartesian Coordinate System**

Identify and define parts of the Cartesian coordinate system, such as the axes, origin, and the four quadrants.

Duration: 0 hr 50 min

Explore: The Equator

Consider the equator as a geographic frame of reference for pinpointing locations on Earth. Learn about how the network of latitude and longitude lines on Earth acts as a Cartesian coordinate system wrapped around a sphere.

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Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: The Cartesian Coordinate System

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 28 points

LESSON 2: GEOMETRY WITH COORDINATES

Study: Geometry with Coordinates

Learn about using geometry with the coordinate system to find lengths of line segments, distances between points, perimeters, and even areas in the xy -plane.

Duration: 0 hr 50 min

Explore: Fermat's Last Theorem

Explore the mystery of Fermat's conjecture about the cubic and higher-order version of the Pythagorean theorem, its connections with the Taniyama-Shimura conjecture, and how it formed the basis for a description of the fundamental properties of space.

Duration: 0 hr 20 min

Practice: Graphing Tool

Use a graphing tool to draw line segments and investigate distance.

Duration: 1 hr Scoring: 25

points

Quiz: Geometry with Coordinates

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 20 points

LESSON 3: THE DISTANCE FORMULA

Study: The Distance Formula

Learn about deriving the distance formula for the xy -plane.

Duration: 0 hr 10 min

Explore: Pythagorean Theorem

Learn about one proof of the Pythagorean theorem (the three squares), as well as Pythagorean triples.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: The Distance Formula

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

24 points

LESSON 4: DATA ANALYSIS**Study: Data Analysis**

Learn about using the Cartesian coordinate system to find patterns in data; plotting points on a graph; dependent and independent variables; converting table data to ordered pairs; and using the best-fit line to estimate the value of data points.

Duration: 0 hr 50 min

Explore: Election Projections

Learn about polling techniques, random sampling, and margin of error using the 2000 presidential election as an example.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Practice: Graphing Tool

Use a graphing tool to find best-fit lines and use them to make predictions.

Duration: 1 hr

Scoring: 25 points

Quiz: Data Analysis

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 18 points

LESSON 5: WRAP-UP**Practice: Assignment**

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercise

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 1 hr

Discuss: You are Here

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

Duration: 0 hr 20 min Scoring: 30 points

Test (CS): Graphing Data

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

Duration: 0 hr 40 min Scoring: 45 points

Test (TS): Graphing Data

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

Duration: 0 hr 30 min Scoring: 50 points

LESSON 6: DIAGNOSTIC

Diagnostic: Graphing Data

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hr 40 min Scoring: 15 points

UNIT 6: ALGEBRA I SEMESTER 1 REVIEW AND EXAM

LESSON 1: PREPARING FOR THE SEMESTER EXAM

Review: Semester Review

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

Duration: 1 hr

Exam: Algebra 1 Semester 1

Duration: 0 hr 50 min Scoring: 250 points

UNIT 7: LINEAR EQUATIONS

LESSON 1: PATTERNS AND LINES

Study: Patterns and Lines

Explore a variety of functional relationships involving direct variation. Get an introduction to lines by examining the connection between the pattern of points on the graph of a line and the line's equation. Find the equation of a line based on the coordinates of its points, and graph a linear equation from a chart of its solutions.

Duration:

0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Practice: Graphing Tool

Use a graphing tool to practice graphing lines.

Duration: 0 hr 30 min Scoring: 25 points

Quiz: Finding Equations of Lines as Solutions

Take a quiz to assess your understanding of the material.

Duration: 0

hr 25 min Scoring: 30 points

LESSON 2: SLOPE**Study: Slope**

Learn about slope, formula, the definition of rise and run, and measuring rate of change.

Duration: 0 hr 40

min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Practice: Graphing Tool

Use a graphing tool to investigate slope.

Duration: 0 hr 30 min Scoring: 25 points

Quiz: Finding Slopes of Lines

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

30 points

Quiz: Positive Negative and Undefined Slopes

Take a quiz to assess your understanding of the material.

Duration: 0

hr 25 min Scoring: 24 points

LESSON 3: PARALLEL AND PERPENDICULAR LINES

Study: Parallel and Perpendicular Lines

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

Duration: 0 hr 40 min

Explore: Parallel Rules

Discover how sailors use nautical tools like parallel rules to chart courses at sea.

Duration: 0 hr

20 min

Explore: Linear Perspective

Explore how artists use geometry to render a 3-D image on the flat plane of a paper or canvas.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Slopes of Parallel and Perpendicular Lines

Take a quiz to assess your understanding of the material.

Duration:

0 hr 25 min Scoring: 30 points

LESSON 4: SLOPE-INTERCEPT EQUATION OF A LINE

Study: Slope-Intercept Equation of a Line

Learn about using slope and y-intercept to find the slope-intercept equation of a line.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Practice: Graphing Tool

Use a graphing tool to graph lines from your equations.

Duration: 0 hr 30 min Scoring: 25

points

Quiz: Finding Slope-Intercept Equations of Lines

Take a quiz to assess your understanding of the material.

Duration:

0 hr 25 min Scoring: 22 points

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LESSON 5: POINT-SLOPE EQUATION OF A LINE

Study: Point-Slope Equation of a Line

Learn about using slope and a point to find the y -intercept of a line; deriving and using the point-slope equation; and the standard form of an equation. Complete an application problem involving a mass on a spring.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Finding the Point-Slope Equation

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

Quiz: Finding the Equations of Lines

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 22 points

LESSON 6: LINEAR INEQUALITIES

Study: Linear Inequalities

Learn about finding and graphing solutions sets for linear inequalities.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Graphs of Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

18 points

Study: Solving the Lighting Problem

Learn about applying linear inequalities in order to solve the real-world problem of energy usage, comparing incandescent and fluorescent light bulbs.

Duration: 0 hr 40 min

LESSON 7: WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercise

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 0 hr 50 min

Discuss: A Slippery Slope

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

Duration: 0 hr 20 min Scoring: 30 points

Test (CS): Linear Equations

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

Duration: 0 hr 40

min Scoring: 57 points

Test (TS): Linear Equations

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

Duration: 0 hr 30

min Scoring: 50 points

LESSON 8: DIAGNOSTIC**Diagnostic: Linear Equations**

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hr 40 min Scoring: 19 points

UNIT 8: SYSTEMS OF LINEAR EQUATIONS

LESSON 1: TWO-VARIABLE SYSTEMS: GRAPHING**Study: Two-Variable Systems: Graphing**

Learn about graphing systems of two linear equations and investigating when and why systems of linear equations have no solutions, exactly one solution, or infinitely many solutions.

Duration: 0 hr 40

min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

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Quiz: Solving with Graphing

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

30 points

LESSON 2: TWO-VARIABLE SYSTEMS: SUBSTITUTION

Study: Two-Variable Systems: Substitution

Learn about replacing a variable with an equal value or expression in order to transform a two-variable equation into a one-variable equation. Learn about using the substitution method to solve systems of linear equations and about applying this method to the real-world problem of a rabbit catching a turtle.

Duration:

0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Solving with Substitution

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

LESSON 3: TWO-VARIABLE SYSTEMS: ELIMINATION

Study: Two-Variable Systems: Elimination

Strategize methods for eliminating a variable term when solving a system of linear equations. Practice adding or subtracting the same value from both sides of an equation in order to eliminate strategic terms. Change equations from nonstandard form to standard form so that they are easier to work with and adapt to the elimination method.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Solving with Elimination Standard Form

Take a quiz to assess your understanding of the material.

Duration: 0

hr 25 min Scoring: 30 points

Quiz: Solving with Elimination Non-Standard Form

Take a quiz to assess your understanding of the material.

LESSON 4: TWO-VARIABLE SYSTEMS: MATRICES

Study: Two-Variable Systems: Matrices

Learn about using a matrix to represent a system of linear equations; using row arithmetic as shorthand for the elimination method; and using matrices to solve systems of linear equations.

Duration: 0 hr

40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Reading and Using Matrices

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 22 points

Quiz: Solving with a Matrix

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 28

points

LESSON 5: TWO-VARIABLE SYSTEMS OF INEQUALITIES

Study: Two-Variable Systems of Inequalities

Learn about graphing and finding solution sets for systems of inequalities, including those with no solution and those with more than two inequalities.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Solving Systems of Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 22 points

Quiz: Solving Systems with More than Two Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 22 points

LESSON 6: THREE-VARIABLE SYSTEMS OF EQUATIONS

Study: Three-Variable Systems of Equations

Learn about using the elimination and substitution methods to solve systems of three linear equations in three variables.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Solving Three-Variable Systems of Equations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 26 points

LESSON 7: THREE-VARIABLE SYSTEMS: MATRICES

Study: Three-Variable Systems: Matrices

Learn about representing a system of three linear equations in three variables with a matrix; using row arithmetic to put a matrix in reduced form; and using matrices to solve systems of equations.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Solving Three-Variable Systems with Matrices

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20 points

LESSON 8: WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercise

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 0 hr 50 min

Discuss: What's the Solution?

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

Duration: 0 hr 20 min Scoring: 30 points

Test (CS): Systems of Linear Equations

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

Duration: 0 hr 40 min Scoring: 75 points

Test (TS): Systems of Linear Equations

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

Duration: 0 hr 30 min Scoring: 50 points

LESSON 9: DIAGNOSTIC

Diagnostic: Systems of Linear Equations

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hr 40 min Scoring: 25 points

UNIT 9: POLYNOMIALS

LESSON 1: WHAT IS A POLYNOMIAL?

Study: What is a Polynomial?

Learn the definitions of monomials, polynomials, constants, terms, coefficients, binomials, trinomials, and degree. Learn about finding degrees of polynomials.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Degrees of Polynomials

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

30 points

Quiz: Degrees of Polynomials (Advanced)

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 30 points

LESSON 2: ADDING AND SUBTRACTING POLYNOMIALS

Study: Adding and Subtracting Polynomials

Learn about using tiles to represent, add, and subtract polynomials and about adding and subtracting polynomials by collecting like terms. Apply these methods to the real-world problem of purchasing streetlamps.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Polynomial Addition with Tiles

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

Quiz: Polynomial Addition

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 28

points

Quiz: Polynomial Subtraction

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

16 points

LESSON 3: MULTIPLYING BINOMIALS

Study: Multiplying Binomials

Learn about using tiles to multiply linear binomials; using the distributive property to simplify and find the product of two binomials; and the FOIL (first, outer, inner, last) method of finding products.

Duration: 0 hr 40

min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Finding Products of Binomials

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 28 points

Quiz: Finding the Product of Two Binomials

Take a quiz to assess your understanding of the material.

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*Duration: 0 hr
25 min Scoring: 30 points*

Quiz: The FOIL Method

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 25 min Scoring: 16
points*

LESSON 4: MULTIPLYING POLYNOMIALS

Study: Multiplying Polynomials

Learn about using a table to multiply polynomials; using the distributive property; and multiplying polynomials by arranging them vertically.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Polynomial Multiplication

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 22 points

Quiz: Polynomial Multiplication (Advanced)

Take a quiz to assess your understanding of the material.

Duration: 0 hr

25 min Scoring: 28 points

LESSON 5: DIVIDING POLYNOMIALS

Study: Dividing Polynomials

Learn about using long division to find the quotient of two polynomials; dividing polynomials with missing terms; and dividing polynomials with remainders.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Polynomial Long Division

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

LESSON 6: GRAPHING POLYNOMIALS

Study: Graphing Polynomials

Learn about graphs as pictures of solution sets. Use a table to find and graph solutions to polynomial equations. Explore why these graphs are always continuous curves. Graph higher-degree polynomial equations by plotting their corresponding points and identifying their parts, such as extreme values (maximum and minimum) and roots.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Finding Extreme Values

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

24 points

Quiz: Finding Roots of Graphs

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

22 points

Study: The Stereo Problem

Apply the method of graphing polynomials in order to solve the real-world problem of finding the relationship between the price of stereos and sales figures.

Duration: 0 hr 40 min

LESSON 7: WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercise

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 0 hr 50 min

Discuss: Thinking Positive in the Real World

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

Duration: 0 hr 20 min Scoring: 30 points

Test (CS): Polynomials

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

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Duration: 0 hr 40 min
Scoring: 75 points

Test (TS): Polynomials

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

Duration: 0 hr 30 min
Scoring: 50 points

LESSON 8: DIAGNOSTIC

Diagnostic: Polynomials

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration:
0 hr 40 min Scoring: 25 points

UNIT 10: FACTORING OF POLYNOMIALS

LESSON 1: WHY FACTOR?

Study: Why Factor?

Learn about composite numbers, reducible polynomials, and the zero product rule.

Duration: 0 hr
40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Factoring Polynomials

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:
30 points

LESSON 2: FACTORING WITH TILES

Study: Factoring with Tiles

Review using tiles to multiply polynomials and to find factors of polynomials.

Duration: 0 hr
40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Practice: Algebra Tiles Tool

Use an algebra tiles tool to investigate perfect-square polynomials.

Duration: 0 hr 30 min

Scoring: 25 points

Quiz: Factoring Polynomials with Tiles

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 24 points

LESSON 3: FACTORING AND GRAPHING

Study: Factoring and Graphing

Learn about the connection between roots and linear factors; using roots on graphs of polynomials to find linear factors; and polynomials with no linear factors or repeated linear factors.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Factoring by Graphing

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

28 points

Quiz: Factoring by Graphing (Advanced)

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 22 points

LESSON 4: GROUPING

Study: Grouping

Learn about polynomials with terms that have a common factor; applying the distributive property in reverse to factor out common factors; and finding the greatest common factor.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Factoring by Grouping

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

30 points

Quiz: Finding GCFs of Polynomials

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 16 points

LESSON 5: FACTORING $X^2 + BX + C$ **Study: Factoring $x^2 + bx + c$**

Learn about factoring quadratic trinomials with leading coefficients of 1; rules for finding the constant term and coefficient of the x-term; using a table to factor trinomials; and diagramming signs while factoring trinomials.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Binomial Factors of Trinomials

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

Quiz: Factoring Trinomials

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 30

points

LESSON 6: FACTORING $AX^2 + BX + C$ **Study: Factoring $ax^2 + bx + c$**

Learn about factoring trinomials with leading coefficients other than 1; factoring out a leading coefficient of -1; how values of factors relate to values of a trinomial; finding factor pairs of leading coefficients and constant terms; and finding signs in factors of trinomials with a leading coefficient different from 1.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Factoring Trinomials (Basic)

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

Quiz: Factoring Trinomials (Advanced)

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

LESSON 7: SPECIAL CASES

Study: Special Cases

Learn about recognizing and factoring a difference of squares; perfect-square trinomials; sums; and differences of two cubes.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Factoring a Difference of Squares

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 30 points

Quiz: Factoring Perfect Square Trinomials

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 20 points

Quiz: Sum or Difference of Two Cubes

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

LESSON 8: SOLVING QUADRATIC EQUATIONS

Study: Solving Quadratic Equations

Learn about solving quadratic equations using factoring and the zero product rule; manipulating a quadratic equation into standard form; and solving quadratic equations with perfect-square trinomials.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Factoring with the Zero Product Rule

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 28 points

Quiz: Converting Quadratics to Standard Form

Take a quiz to assess your understanding of the material.

Duration: 0

hr 25 min Scoring: 28 points

Quiz: Quadratics with Perfect Square Trinomials

Take a quiz to assess your understanding of the material.

Duration: 0

hr 25 min Scoring: 16 points

LESSON 9: COMPLETING THE SQUARE**Study: Completing the Square**

Learn about solving quadratic equations without perfect-square trinomials; completing the square using tiles; and completing the square when the coefficients are more complicated.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Completing the Square

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

24 points

Quiz: Completing the Square (Advanced)

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 24 points

LESSON 10: THE QUADRATIC FORMULA**Study: The Quadratic Formula**

Learn about types of equations that can be solved using the quadratic formula; complex

numbers; discriminants; and finding roots (including complex roots) using the quadratic formula.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Complex Numbers and Discriminants

Take a quiz to assess your understanding of the material.

Duration: 0 hr

25 min Scoring: 30 points

Quiz: The Quadratic Formula

Take a quiz to assess your understanding of the material.

Duration: 0 hr 30 min Scoring:

30 points

LESSON 11: WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercise

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 0 hr 50 min

Discuss: Being Part of a Group

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

Duration: 0 hr 20 min Scoring: 30 points

Test (CS): Factoring of Polynomials

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

Duration: 0 hr 40 min Scoring: 99 points

Test (TS): Factoring of Polynomials

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

Duration:

0 hr 30 min Scoring: 50 points

LESSON 12: DIAGNOSTIC

Diagnostic: Factoring of Polynomials

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hr 40 min Scoring: 33 points

UNIT 11: INTRO TO DATA ANALYSIS & PROBABILITY

LESSON 1: WHAT IS A STATISTIC?

Study: What Is a Statistic?

Learn about descriptive inferential statistics, statistics parameters, sampling techniques, random samples, categorical numerical data, and graphic displays.

Duration: 0 hr 40 min Scoring: 0 points

Explore: Gross National Product

Gross National Product, histograms, data displays

Duration: 0 hr 15 min Scoring: 0 points

Explore: US Census

Learn about statistics and parameters as they relate to a U.S. population census.

Duration: 0 hr 15 min Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hr 30 min Scoring: 0 points

Quiz: What Is a Statistic?

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 28 points

Quiz: Types of Data

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 26 points

LESSON 2: GRAPHICAL ANALYSIS OF DATA

Study: Graphical Analysis of Data

Learn about the different ways to express data graphically and the various shapes or properties these representations have.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Graphical Analysis of Data

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 24 points

LESSON 3: NUMERICAL ANALYSIS OF DATA

Study: Numerical Analysis of Data

Learn about the numerical analysis of data as it relates to means, medians, modes, IQR outliers, test quartiles, boxplots, variance, and standard deviation.

Duration: 0 hr 40 min

Explore: TV Ratings

Learn about how the Nielsen ratings use samples to describe populations.

Duration: 0 hr 20 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Practice: The Boxplot Tool

Practice using boxplots to compare data sets.

Duration: 0 hr 30 min Scoring: 25 points

Quiz: Measures of Central Tendency

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

Quiz: Quartiles and Boxplots

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

28 points

Quiz: Measures of Spread

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 26

points

LESSON 4: WHAT IS PROBABILITY?

Study: What Is Probability?

Learn about probability, random events, and theoretical and empirical forms.

Duration: 0 hr

40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: What Is Probability?

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 22

points

Quiz: Sample Space

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 24 points

Study: Organizing What is Possible

Learn about counting strategies and developing general principles for counting outcomes.

Duration: 0 hr 40 min

LESSON 5: COUNTING PRINCIPLES**Study: Counting Principles**

Learn about multiplication, principle-tree diagrams, Venn diagrams, permutations, and combinations.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Counting Principles

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16

points

LESSON 6: BASIC RULES OF PROBABILITY**Study: Basic Rules of Probability**

Learn four fundamental rules of probability, the addition rule for disjoint events, and the multiplication rule for independent events.

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Basic Rules of Probability

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 24 points

Quiz: Basic Rules of Probability II

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 24 points

LESSON 7: WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Review Exercises

Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 0 hr 50 min

Discuss: Intro to Data Analysis & Probability

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

Duration: 0 hr 20 min Scoring: 30 points

Test (CS): Intro to Data Analysis & Probability

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

Duration: 0 hr 40 min Scoring: 75 points

Test (TS): Intro to Data Analysis & Probability

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

Duration: 0 hr 30 min Scoring: 50 points

LESSON 8: DIAGNOSTIC

Diagnostic: Intro to Data Analysis & Probability

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hr 40 min Scoring: 25 points

UNIT 12: ALGEBRA I SEMESTER 2 REVIEW AND EXAM

LESSON 1: PREPARING FOR THE SEMESTER EXAM

Review: Semester Review

Prepare for the semester exam by reviewing key concepts covered in Algebra I Semester 2.

Duration: 1 hr

Exam: Semester Exam

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

Duration: 0 hr 50 min Scoring: 258 points