

Florida Algebra I focuses on the understanding of key algebraic topics and the mastery of critical reasoning skills. It is aligned with Florida's Next Generation Sunshine State Standards and prepares students for Florida's end-of-course assessment for Algebra I. Through a "Discovery-Confirmation-Practice"-based exploration of algebraic concepts, students are challenged to work toward a mastery of computational skills, to deepen their conceptual understanding of key ideas and solution strategies, and to extend their knowledge in a variety of problem-solving applications. Course topics include algebraic expressions and equations; problem solving with functions; graphing; linear equations and inequalities; polynomials; radical expressions and equations; rational expressions and functions; and matrices.

Florida Algebra I features ample opportunity for students to hone their computational skills by working through practice problem sets before moving on to formal assessment. Throughout the course, diagnostic assessments help students to quickly identify areas of weakness and improve performance while summative assessments chart progress and skill development.

The content is specifically aligned with Florida's Next Generation Sunshine State Standards and Benchmarks.

Length: Two Semesters

UNIT 1: PATTERNS IN MATHEMATICS

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 hr 40 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: Types of Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20 points

Quiz: Rational and Irrational Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

LESSON 2: 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 40 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 3: 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 40 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 4: 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 40 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 5: 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.

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: Variables and Problem Solving

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Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 28 points

LESSON 6: WHAT IS A SET?

Study: What Is a Set?

Define a set and its parts. Explore sets in the real world.

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 a Set?

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 7: SET NOTATION

Study: Set Notation

Learn the standard notation for sets.

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: Set Notation

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 8: SET OPERATIONS

Study: Set Operations

Learn to perform operations on sets, including union and intersection, complement, and Cartesian product.

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: Set Operations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 9: SET RELATIONSHIPS

Study: Set Relationships

Use Venn diagrams to explore such concepts as inclusion, containment, and subsets.

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: Set Relationships

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 10: PATTERNS IN MATHEMATICS WRAP-UP

Test (CS): Patterns in Mathematics

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

Duration:

1 hr Scoring: 75 points

LESSON 11: DIAGNOSTIC

Diagnostic: Patterns in Mathematics

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min Scoring: 40 points

UNIT 2: ALGEBRAIC EXPRESSIONS AND EQUATIONS

LESSON 1: PROPERTIES OF OPERATIONS

Study: Properties of Operations

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Learn about the associative, commutative, and distributive properties of addition and multiplication.

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: The Associative Property

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

Scoring: 12 points

Quiz: The Commutative and Distributive Properties

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 2: 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 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

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 3: 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 40 min

Checkpoint: Practice Problems

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

Duration: 0 hr 30 min

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 4: 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 40 min

Checkpoint: 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 5: 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 40 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 6: 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 7: ALGEBRAIC EXPRESSIONS AND EQUATIONS WRAP-UP

Test (CS): Algebraic Expressions and Equations

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

Duration: 1 hr Scoring: 75 points

LESSON 8: DIAGNOSTIC

Diagnostic: Algebraic Expressions and Equations

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min Scoring: 30 points

UNIT 3: PROPORTIONAL REASONING

LESSON 1: SOME GUIDELINES FOR PROBLEM SOLVING

Study: Some Guidelines for Problem Solving

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

Duration: 0 hr 40 min

Quiz: Some Guidelines for Problem Solving

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, and

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canceling units.

Duration: 0 hr 40 min

Checkpoint: 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 15 min Scoring: 12

points

Quiz: Converting Units

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12

points

LESSON 3: UNITS AND REASONABLE VALUES

Study: Units and Reasonable Values

Learn about units of measurement and predict reasonable values for answers to word problems.

Duration: 0 hr 40 min Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hr 30 min Scoring: 0 points

Quiz: Units and Reasonable Values

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

Duration: 0 hr

20 min Scoring: 20 points

LESSON 4: 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 40 min

Checkpoint: 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 5: INTRODUCTION TO RATIOS

Study: Introduction to Ratios

Learn about writing fractions as ratios, simplifying ratios, other ways to write ratios, and the order of numbers in a ratio. Practice these skills using sample problems.

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: Introduction to Ratios

Take a quiz to assess your understanding of the material.

Duration: 0 hr 20 min Scoring: 10

points

LESSON 6: COMPARING RATIOS

Study: Comparing Ratios

Learn how to compare two ratios and convert ratios into fractions and percentages.

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: Comparing Ratios

Take a quiz to assess your understanding of the material.

Duration: 0 hr 20 min Scoring: 10

points

LESSON 7: RATES

Study: Rates

Use ratios to define rates and solve rate problems.

Duration: 0 hr 40 min

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Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Rates

Take a quiz to assess your understanding of the material.

Duration: 0 hr 20 min Scoring: 8 points

LESSON 8: PROBLEM SOLVING**Study: Problem Solving**

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

Duration: 0 hr 40 min

Practice: Assignment

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

Duration: 0 hr 40 min Scoring: 25 points

LESSON 9: RATES OF CHANGE**Study: Rates of Change**

Learn about average rate of change by discussing the example of average speed. Discover the difference between constant and variable rates of change.

Duration: 0 hr 40 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: Rates of Change

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20 points

LESSON 10: PROPORTIONS**Study: Proportions**

Learn the definition of a rational expression and learn about using proportional reasoning to solve problems. Explore real-world examples of proportional reasoning.

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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: Proportion Builder Tool

Use a proportion builder tool to investigate proportions.

Duration: 0 hr 40 min

Scoring: 25 points

Quiz: Proportions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16 points

LESSON 11: PROPORTIONAL REASONING WRAP-UP

Test (CS): Proportional Reasoning

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

Duration:

1 hr Scoring: 75 points

LESSON 12: DIAGNOSTIC

Diagnostic: Proportional Reasoning

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min Scoring: 37 points

UNIT 4: FUNCTIONS AND RELATIONS

LESSON 1: VARIABLE EXPRESSIONS

Study: Variable Expressions

Define and form variable expressions using operations.

Duration: 0 hr 40 min Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hr 30 min Scoring: 0 points

Quiz: Variable Expressions

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

Duration: 0 hr 25 min

Scoring: 20 points

LESSON 2: MATHEMATICAL SENTENCES

Study: Mathematical Sentences

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

Duration: 0 hr 40 min Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hr 30 min Scoring: 0 points

Quiz: Mathematical Sentences

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

Duration: 0 hr 25

min Scoring: 20 points

LESSON 3: FUNCTION NOTATION

Study: Function Notation

Learn about and explore examples of function notation.

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: Translating to Function Notation

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

Scoring: 12 points

Quiz: Function Notation for Specific Amounts

Take a quiz to assess your understanding of the material.

Duration: 0 hr

15 min Scoring: 12 points

Quiz: Naming Functions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12

LESSON 4: FUNCTIONS AND RELATIONS

Study: Functions and Relations

Learn about using mapping diagrams; ordered pairs on diagrams; the difference between mapping diagrams of functions and relations; the vertical-line test; and equations of functions and relations.

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: Mapping Functions and Relations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15

min Scoring: 12 points

Quiz: Identifying Functions and Relations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15

min Scoring: 12 points

LESSON 5: DOMAIN AND RANGE

Study: Domain and Range

Learn about domain and range on a mapping diagram, estimating domain and range of functions, and calculating the domain of a function from an equation.

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: Domain and Range

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12

points

LESSON 6: FUNCTIONS AND RELATIONS WRAP-UP

Test (CS): Functions and Relations

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

Duration:

1 hr Scoring: 75 points

LESSON 7: DIAGNOSTIC

Diagnostic: Functions and Relations

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min Scoring: 24 points

UNIT 5: 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

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: LINES IN THE XY-PLANE

Study: Lines in the xy -plane

Learn about plotting solution set values of equations as data points on the xy -plane (that is, plotting the graph of the equation).

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: Lines in the xy -plane

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 3: SLOPE

Study: Slope

Learn about rise, run, and the slope formula. Learn about rearranging a formula to compute rise and run, negative zero, and undefined slopes.

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 Slope of a Line (Basic)

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

Quiz: Finding the Slope of a Line (Advanced)

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

Quiz: Identifying Types of Slopes

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 4: SLOPE AND EQUATIONS

Study: Slope and Equations

Learn about finding the equation of a line. Learn about slope as the coefficient of the variable in the linear equation ($y = mx$).

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: Slope and Equations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 5: SLOPE-INTERCEPT FORM

Study: Slope-Intercept Form

Determine the equations of lines that don't pass through the origin. Plot a set of points to find the graph, slope, and y -intercept equation of a line. Discover the general form of 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

Quiz: Slope-Intercept Form

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 6: GRAPHING AND MANIPULATING $Y = MX + B$

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

Learn, describe, and predict how changing the values of m and b in the slope-intercept equation of a line changes the graph of the equation.

Duration: 0 hr 40 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: Graphing and Manipulating $y = mx + b$

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20 points

LESSON 7: POINT-SLOPE FORM

Study: Point-Slope Form

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Learn about the point-slope equation and about manipulating equations into slope-intercept form.

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: Point-Slope Equation of a Line

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

Scoring: 12 points

Quiz: Point-Intercept Equation of a Line

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15

min Scoring: 12 points

LESSON 8: PROPERTIES OF LINES

Study: Properties of Lines

Derive information about lines in their various forms.

Duration: 0 hr 40 min

Practice: Properties of Lines

Submit your work for a set of 20 practice problems.

Duration: 0 hr 40 min Scoring: 25

points

LESSON 9: PARALLEL AND PERPENDICULAR LINES

Study: Parallel and Perpendicular Lines

Define parallel lines and the relationship of their slopes. Identify perpendicular lines, how they intersect, and the product of their slopes as negative reciprocals.

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: Parallel and Perpendicular Lines

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

Scoring: 12 points

LESSON 10: LINEAR EQUATIONS WRAP-UP

Test (CS): Linear Equations

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

Duration: 1 hr

Scoring: 75 points

LESSON 11: DIAGNOSTIC

Diagnostic: Linear Equations

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr

40 min Scoring: 29 points

UNIT 6: SYSTEMS OF LINEAR EQUATIONS

LESSON 1: FORMULATING SYSTEMS OF EQUATIONS

Study: Formulating Systems of Equations

Learn how to formulate mathematical equations from word problems that are described by a system of two equations or inequalities.

Duration: 0 hr 40 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: Formulating Systems of Equations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 20 points

LESSON 2: 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

Quiz: Solving with Graphing

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

30 points

LESSON 3: 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 4: 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.

Duration: 0 hr 25 min Scoring: 26 points

LESSON 5: SYSTEMS OF LINEAR EQUATIONS WRAP-UP

Test (CS): Systems of Linear Equations

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

Duration: 1 hr Scoring: 75 points

LESSON 6: DIAGNOSTIC

Diagnostic: Systems of Linear Equations

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min Scoring: 29 points

UNIT 7: LINEAR INEQUALITIES

LESSON 1: SOLVING INEQUALITIES

Study: Solving Inequalities

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

Quiz: Solving Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12 points

LESSON 2: INEQUALITIES

Study: Inequalities

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

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Solving Inequalities with Division

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15

min Scoring: 12 points

Quiz: Solving Inequalities with Multiplication

Take a quiz to assess your understanding of the material.

Duration: 0 hr

15 min Scoring: 12 points

LESSON 3: INEQUALITIES AND ABSOLUTE VALUE**Study: Inequalities and Absolute Value**

Learn about using a number line to find solution sets of equations with absolute values.

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: Inequalities and Absolute Value

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

Scoring: 12 points

LESSON 4: MULTISTEP AND COMPOUND INEQUALITIES**Study: Multistep and Compound Inequalities**

Apply the techniques you have learned so far in this unit to solve multistep and compound 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: Multistep and Compound Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hr

15 min Scoring: 12 points

LESSON 5: LINEAR INEQUALITIES

Study: Linear Inequalities

Learn about graphing inequalities and the half-plane. Discover three steps to graphing inequalities.

Duration: 0 hr 40 min

Checkpoint: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Linear Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12

points

LESSON 6: 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

Checkpoint: 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 two-variable systems of inequalities.

Duration: 0 hr 40 min

Scoring: 25 points

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 7: PROBLEM SOLVING

Study: Problem Solving

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

Duration: 0 hr 40 min

Practice: Assignment

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

Duration: 0 hr 40 min Scoring: 25 points

LESSON 8: LINEAR INEQUALITIES WRAP-UP

Test (CS): Linear Inequalities

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

*Duration: 1 hr
Scoring: 75 points*

LESSON 9: DIAGNOSTIC

Diagnostic: Linear Inequalities

Take a diagnostic test that will create a study plan based on your answers.

*Duration: 0
hr 40 min Scoring: 37 points*

UNIT 8: FLORIDA ALGEBRA I SEMESTER 1 EXAM

LESSON 1: FLORIDA ALGEBRA I SEMESTER 1 EXAM

Exam: Florida Algebra I Semester 1 Exam

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

Duration: 1 hr Scoring: 200 points

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UNIT 9: FUNCTIONS

LESSON 1: FUNCTION NOTATION

Study: Function Notation

Review the concepts of domain, range, and independent and dependent variables. Learn about function notation, and work with tables and dot plots to discover the difference between a relation and a function.

Duration:

0 hr 40 min Scoring: 0 points

Checkpoint: Practice Problems

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

Duration: 0 hr 30 min

Scoring: 0 points

Quiz: Function Notation

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20

points

LESSON 2: EQUALITY OF FUNCTIONS

Study: Equality of Functions

Learn the difference between discrete and continuous domains and use this distinction to discover what it means for two functions to be equal.

Duration: 0 hr 40 min Scoring: 0 points

Checkpoint: Practice Problems

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

Duration: 0 hr 30 min

Scoring: 0 points

Quiz: Equality of Functions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20

points

LESSON 3: DATA ANALYSIS

Study: Data Analysis

Learn about using the Cartesian coordinate system to find patterns in data; plotting points on a

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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 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 find best-fit lines and use them to make predictions.

Duration: 0 hr 40

min 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 4: SHIFTS OF LINES

Study: Shifts of Lines

Learn about vertical and horizontal shifts of functions in the context of the example $y = f(x) = x$. Discover that shifting a line does not change the slope.

Duration: 0 hr 40 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: Shifts of Lines

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20 points

LESSON 5: THE EQUATION OF A LINE

Study: The Equation of a Line

Apply the stretch and contract transformations to the line $y = x$ and discover that these are equivalent to changing the slope. Discover the point-slope and slope-intercept equations of a general line.

Duration: 0 hr

40 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: The Equation of a Line

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

20 points

LESSON 6: SHIFTING FUNCTIONS

Study: Shifting Functions

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

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Shifting Functions Vertically

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 18 points

Quiz: Shifting Functions Horizontally

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 16 points

Quiz: Shifting Functions Vertically and Horizontally

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 18 points

LESSON 7: STRETCHING FUNCTIONS VERTICALLY

Study: Stretching Functions Vertically

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

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: Stretching Functions Vertically

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 16 points

LESSON 8: ABSOLUTE VALUE

Study: Absolute Value

Learn the definition of the absolute-value function. Explore concepts of propositional logic — such as contrapositive, inverse, and converse — by analyzing statements concerning the absolute-value function.

Duration: 0 hr

40 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: Absolute Value

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20 points

LESSON 9: FUNCTIONS WRAP-UP

Test (CS): Functions

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

Duration: 1 hr Scoring:

75 points

LESSON 10: DIAGNOSTIC

Diagnostic: Functions

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min

Scoring: 42 points

UNIT 10: EXPONENTS

LESSON 1: DEFINITIONS AND EXAMPLES OF EXPONENTS

Study: Definitions and Examples of Exponents

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

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Definitions and Examples of Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hr

15 min Scoring: 12 points

LESSON 2: 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 hr 40 min Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hr 30 min Scoring: 0 points

Quiz: Exponential Expressions

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

Duration: 0 hr 25

min Scoring: 20 points

Quiz: Operations with Radicals

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

Duration: 0 hr 25

min Scoring: 20 points

Quiz: Scientific Notation

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

Duration: 0 hr 25 min

Scoring: 20 points

LESSON 3: LAWS OF EXPONENTS

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Study: Laws of Exponents

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

Duration: 0 hr 40 min

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: The Multiplication Law of Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15

min Scoring: 12 points

Quiz: Zero and Negative Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

Scoring: 12 points

Quiz: The Division Law of Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

Scoring: 12 points

Quiz: Raising Products and Fractions to a Power

Take a quiz to assess your understanding of the material.

Duration:

0 hr 15 min Scoring: 12 points

Quiz: The Power Rule of Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

Scoring: 12 points

LESSON 4: SCIENTIFIC NOTATION**Study: Scientific Notation**

Learn about expressing large numbers using scientific notation and about the form of scientific notation. Explore examples from elementary science.

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: Scientific Notation

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Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12

points

LESSON 5: EXPONENTS IN GEOMETRY

Study: Exponents in Geometry

Learn about using exponents to represent area and volume formulae. Explore units of area and volume.

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: Exponents in Geometry

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring:

12 points

LESSON 6: WHAT IS A MONOMIAL?

Study: What Is a Monomial?

Explore the world of monomials.

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: Algebra Tiles Tool

Use an algebra tiles tool to investigate monomials.

Duration: 0 hr 40 min Scoring: 25 points

Quiz: What Is a Monomial?

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20

points

LESSON 7: EXPONENTIAL FUNCTIONS

Study: Exponential Functions

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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 hr
40 min*

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Evaluating Exponential Functions

Take a quiz to assess your understanding of the material.

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

Quiz: Calculating Exponential Growth

Take a quiz to assess your understanding of the material.

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

LESSON 8: 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 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 Exponential Functions

Take a quiz to assess your understanding of the material.

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

LESSON 9: 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 hr 40
min*

Checkup: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Geometric Sequences

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

26 points

Quiz: Formulas for Geometric Sequences

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 24 points

LESSON 10: EXPONENTS WRAP-UP**Test (CS): Exponents**

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

Duration: 1 hr Scoring:

75 points

LESSON 11: DIAGNOSTIC**Diagnostic: Exponents**

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min

Scoring: 39 points

UNIT 11: QUADRATIC EQUATIONS AND FUNCTIONS

LESSON 1: 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.

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 2: 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 3: WHY FACTOR?

Study: Why Factor?

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

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

Quiz: Factoring Polynomials

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

30 points

LESSON 4: 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 5: 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 6: 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 7: 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

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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 8: 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 9: 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

Checkpoint: 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 10: APPLICATIONS OF QUADRATIC EQUATIONS

Study: Solving Quadratic Equations

Learn the definition of a quadratic equation. Discover how the square-root function can be used to solve quadratics without a linear term. Use factoring to solve more general quadratic equations.

Duration: 0

hr 50 min Scoring: 0 points

Checkpoint: Practice Problems

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

Duration: 0 hr 30 min

Scoring: 0 points

Quiz: Solving Quadratic Equations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 20 points

LESSON 11: 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

Checkpoint: 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 12: GRAPHS OF QUADRATIC FUNCTIONS

Study: Graphs of Quadratic Functions

Relate factors of a quadratic function to the graph of a parabola and its corresponding x-intercepts. Locate the vertex of a quadratic function graphically and algebraically. Use the discriminant of the quadratic formula to identify the number and types of solutions to a given quadratic equation, as well as to visualize its corresponding graph.

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: Graphs of Quadratic Functions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

Quiz: Working with the Discriminant

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 20 points

LESSON 13: QUADRATIC EQUATIONS AND FUNCTIONS WRAP-UP

Test (CS): Quadratic Equations and Functions

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

Duration: 1 hr Scoring: 75 points

LESSON 14: DIAGNOSTIC

Diagnostic: Quadratic Equations and Functions

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min Scoring: 44 points

UNIT 12: RADICAL EXPRESSIONS AND EQUATIONS

LESSON 1: BASICS OF RADICALS

Study: Basics of Radicals

Learn the definition of radical expression. Explore simplifying the product and quotient of radicals and simplifying individual radicals.

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: Simplifying Products of Radicals

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

Quiz: Simplifying Quotients of Radicals

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25

min Scoring: 30 points

LESSON 2: MULTIPLYING AND DIVIDING RADICALS

Study: Multiplying and Dividing Radicals

Learn about multiplying and dividing radical expressions that include variables and about using the FOIL (first, inner, outer, last) method to simplify radical expressions.

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: Multiplying Radicals

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 30

points

Quiz: Dividing Radicals

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 28 points

LESSON 3: ADDING AND SUBTRACTING RADICALS

Study: Adding and Subtracting Radicals

Learn about adding and subtracting radical expressions by combining like terms and about simplifying terms to get the same radicand.

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: Adding and Subtracting Radicals

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

LESSON 4: RATIONALIZING DENOMINATORS

Study: Rationalizing Denominators

Learn about rationalizing a denominator in order to simplify a fraction with a radical expression in the denominator. Learn about multiplying by the conjugate of a denominator.

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: Rationalizing Denominators

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

LESSON 5: SOLVING RADICAL EQUATIONS

Study: Solving Radical Equations

Learn how to solve equations with radical expressions by isolating the radical and squaring both sides.

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Duration: 0 hr 40 min

Checkout: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Solving Radical Equations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min

Scoring: 30 points

Study: Applications of Radical Equations

Explore case studies in order to practice methods of solving radical equations in applied settings.

Duration: 0 hr 40 min

LESSON 6: RADICAL EXPRESSIONS AND EQUATIONS WRAP-UP

Test (CS): Radical Expressions and Equations

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

Duration: 1 hr Scoring: 75 points

LESSON 7: DIAGNOSTIC

Diagnostic: Radical Expressions and Equations

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min Scoring: 30 points

UNIT 13: RATIONAL EXPRESSIONS AND FUNCTIONS

LESSON 1: RATIONAL EXPRESSIONS

Study: Rational Expressions

Learn about finding the value of a rational expression and about undefined rational expressions.

Duration: 0 hr 40 min

Checkout: Practice Problems

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

Duration: 0 hr 30 min

Quiz: Rational Expressions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16 points

LESSON 2: SIMPLIFYING RATIONAL EXPRESSIONS

Study: Simplifying Rational Expressions

Practice finding and dividing out common factors in numerators and denominators of rational expressions. Explore the crucial difference between common factors and terms.

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: Simplifying Rational Expressions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 16 points

LESSON 3: MULTIPLYING AND DIVIDING RATIONAL EXPRESSIONS

Study: Multiplying and Dividing Rational Expressions

Review multiplying and dividing numerical fractions, multiplying rational expressions, dividing rational expressions, and simplifying the results.

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: Multiplying Rational Expressions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 18 points

Quiz: Dividing Rational Expressions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 18 points

LESSON 4: ADDING AND SUBTRACTING RATIONAL EXPRESSIONS

Study: Adding and Subtracting Rational Expressions

Review adding and subtracting numerical fractions; adding and subtracting rational expressions with like denominators; finding least common denominators; multiples of rational expressions; and adding and subtracting rational expressions with unlike denominators.

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: Adding and Subtracting Rational Expressions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 22 points

LESSON 5: INVERSE VARIATION

Study: Inverse Variation

Review direct variation and how increasing input leads to proportionally increasing output. Review inverse variation and how increasing input leads to proportionally decreasing output. Review finding the constant of variation.

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: Inverse Variation

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 18 points

LESSON 6: ADVANCED PROPORTIONS

Study: Advanced Proportions

Learn how to solve more advanced proportions and explore real-world scenarios that require advanced proportional reasoning.

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: Advanced Proportions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring:

20 points

LESSON 7: RATIONAL EQUATIONS

Study: Rational Equations

Learn how to solve simple rational equations.

Duration: 0 hr 40 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: Rational Equations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20

points

LESSON 8: RATIONAL FUNCTIONS

Study: Rational Functions

Learn the definition of a rational function and about finding the domain of a given function.

Explore the horizontal and vertical asymptotes of rational functions.

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: Rational Functions

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 28

points

LESSON 9: RATIONAL EXPRESSIONS AND EQUATIONS WRAP-UP

Test (CS): Rational Expressions and Equations

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

Duration: 1 hr Scoring: 75 points

LESSON 10: DIAGNOSTIC

Diagnostic: Rational Expressions and Equations

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min Scoring: 38 points

UNIT 14: MATRICES

LESSON 1: 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 2: 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 3: LINEAR SYSTEMS

Study: Finding the Point of Intersection

Find the point of intersection of linear systems using algebra, graphing, and matrices.

Duration: 0 hr 40 min

Checkup: Lessons Learned

Complete a set of practice problems on linear systems.

Duration: 0 hr 30 min

Quiz: Linear Systems

Take a quiz to assess your understanding of the material.

Duration: 0 hr 40 min Scoring: 20 points

LESSON 4: SHIFTING FUNCTIONS

Study: Getting a Move On

Learn how to reflect about the x - and y -axes. Learn about horizontal and vertical shifts and horizontal and vertical stretches.

Duration: 0 hr 40 min

Checkup: Lessons Learned

Complete a set of practice problems on transformations.

Duration: 0 hr 30 min

Quiz: Transformations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 40 min Scoring: 20 points

LESSON 5: TRANSFORMATIONS

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Study: Transformations

Learn about general transformations of the graph of a function.

Duration: 0 hr 40 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: Transformations

Take a quiz to assess your understanding of the material.

Duration: 0 hr 25 min Scoring: 20

points

LESSON 6: MATRICES WRAP-UP**Test (CS): Matrices**

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

Duration: 1 hr Scoring: 75

points

LESSON 7: DIAGNOSTIC**Diagnostic: Matrices**

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hr 40 min

Scoring: 29 points

UNIT 15: FLORIDA ALGEBRA I SEMESTER 2 EXAM

LESSON 1: FLORIDA ALGEBRA I SEMESTER 2 EXAM**Exam: Florida Algebra I Semester 2 Exam**

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

Duration: 1 hr Scoring: 200 points
