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 course is built to 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 hrs 40 mins Scoring: 0 points

**Checkup: Practice Problems**
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

**Quiz: Types of Numbers**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

**Quiz: Rational and Irrational Numbers**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

**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 hrs 40 mins

**Checkup: Practice Problems**
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

**Quiz: Properties of Operations**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points
Quiz: Order of Operations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Like Denominators
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Equivalent Fractions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 18 points

Quiz: Fractions, Decimals, and Percents
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Exponential Expressions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Operations with Radicals
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Scientific Notation
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins
Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Variables and Problem Solving
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: What Is a Set?
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

LESSON 7: SET NOTATION
Study: Set Notation
Learn the standard notation for sets.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Set Notation
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Set Operations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

LESSON 9: SET RELATIONSHIPS
Study: Set Relationships
Use Venn diagrams to explore such concepts as inclusion, containment, and subsets.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins
Quiz: Set Relationships
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins Scoring: 40 points

UNIT 2: ALGEBRAIC EXPRESSIONS AND EQUATIONS
LESSON 1: PROPERTIES OF OPERATIONS
Study: Properties of Operations
Learn about the associative, commutative, and distributive properties of addition and multiplication.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: The Associative Property
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

Quiz: The Commutative and Distributive Properties
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving Equations with Addition and Subtraction
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Solving Inequalities with Addition and Subtraction
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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.
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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving with Roots and Powers
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Solving Inequalities with Roots and Powers
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Finding Solution Sets with Inequalities
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Basic Collecting of Like Terms
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Advanced Collecting of Like Terms
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 hrs 40 mins

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

Duration: 0 hrs 30 mins

**Quiz: Polynomial Addition with Tiles**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

**Quiz: Polynomial Addition**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

**Quiz: Polynomial Subtraction**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins 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 hrs 40 mins

**Quiz: Some Guidelines for Problem Solving**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

LESSON 2: CONverting UNITS

**Study: Converting Units**
Learn about converting between units from different systems, multiplication by one, and canceling units.
Duration: 0 hrs 40 mins
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 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Units and Reasonable Values
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 20 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Applications of Measurement
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Introduction to Ratios
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 20 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Comparing Ratios
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 7: RATES
Study: Rates
Use ratios to define rates and solve rate problems.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Rates
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 20 mins 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 hrs 40 mins

Practice: Assignment
Submit your work for a set of problem-solving applications.
Duration: 0 hrs 40 mins 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 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Rates of Change
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Practice: Proportion Builder Tool
Use a proportion builder tool to investigate proportions.
Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Proportions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins Scoring: 37 points

UNIT 4: FUNCTIONS AND RELATIONS

LESSON 1: VARIABLE EXPRESSIONS
Study: Variable Expressions
Define and form variable expressions using operations.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Variable Expressions
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins 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 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Mathematical Sentences
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: FUNCTION NOTATION
Study: Function Notation
Learn about and explore examples of function notation.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.  
Duration: 0 hrs 30 mins

**Quiz: Translating to Function Notation**  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 15 mins Scoring: 12 points

**Quiz: Function Notation for Specific Amounts**  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 15 mins Scoring: 12 points

**Quiz: Naming Functions**  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 15 mins Scoring: 12 points

**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 hrs 40 mins

**Checkup: Practice Problems**  
Complete a set of practice problems to hone your calculation skills.  
Duration: 0 hrs 30 mins

**Quiz: Mapping Functions and Relations**  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 15 mins Scoring: 12 points

**Quiz: Identifying Functions and Relations**  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 15 mins 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 hrs 40 mins

**Checkup: Practice Problems**  
Complete a set of practice problems to hone your calculation skills.  
Duration: 0 hrs 30 mins

**Quiz: Domain and Range**  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 15 mins 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**
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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Finding Equations of Lines as Solutions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Lines in the $xy$-plane
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Finding the Slope of a Line (Basic)
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

Quiz: Finding the Slope of a Line (Advanced)
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

Quiz: Identifying Types of Slopes
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Slope and Equations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Slope-Intercept Form
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Graphing and Manipulating \(y = mx + b\)
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: POINT-SLOPE FORM
Study: Point-Slope Form
Learn about the point-slope equation and about manipulating equations into slope-intercept form.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Point-Slope Equation of a Line
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

Quiz: Point-Intercept Equation of a Line
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

LESSON 8: PROPERTIES OF LINES
Study: Properties of Lines
Derive information about lines in their various forms.
Duration: 0 hrs 40 mins

Practice: Properties of Lines
Submit your work for a set of 20 practice problems.
Duration: 0 hrs 40 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Parallel and Perpendicular Lines
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins 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 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Formulating Systems of Equations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving with Graphing
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

LES5ON 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving with Substitution
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

LES5ON 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving with Elimination — Standard Form
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Solving with Elimination — Non-Standard Form
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 26 points

LES5ON 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

LES5ON 6: DIAGNOSTIC

Diagnostic: Systems of Linear Equations
Take a diagnostic test that will create a study plan based on your answers.
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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving Inequalities
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving Inequalities with Division
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

Quiz: Solving Inequalities with Multiplication
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Inequalities and Absolute Value
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Quiz: Multistep and Compound Inequalities  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems  
Complete a set of practice problems to hone your calculation skills.  
Duration: 0 hrs 30 mins

Quiz: Linear Inequalities  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems  
Complete a set of practice problems to hone your calculation skills.  
Duration: 0 hrs 30 mins

Practice: Graphing Tool  
Use a graphing tool to investigate two-variable systems of inequalities.  
Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Solving Systems of Inequalities  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 25 mins Scoring: 22 points

Quiz: Solving Systems with More Than Two Inequalities  
Take a quiz to assess your understanding of the material.  
Duration: 0 hrs 25 mins 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 hrs 40 mins

Practice: Assignment  
Submit your work for a set of problem-solving applications.  
Duration: 0 hrs 40 mins 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 hrs 40 mins 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

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 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Function Notation
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Equality of Functions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Practice: Graphing Tool
Use a graphing tool to find best-fit lines and use them to make predictions.
Duration: 0 hrs 40 mins Scoring: 25 points
Quiz: Data Analysis
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Shifts of Lines
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: The Equation of a Line
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Shifting Functions Vertically
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 18 points

Quiz: Shifting Functions Horizontally
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Shifting Functions Vertically and Horizontally
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Stretching Functions Vertically
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins

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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Absolute Value
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins

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 hrs 40 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Definitions and Examples of Exponents
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Exponential Expressions
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Operations with Radicals
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Scientific Notation
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: LAWS OF EXPONENTS

Study: Laws of Exponents
Learn about the multiplication law of exponents with positive and negative exponents; the rule for negative exponents; the division law of exponents; raising products and fractions to a power; and the power rule of exponents.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: The Multiplication Law of Exponents
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

Quiz: Zero and Negative Exponents
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

Quiz: The Division Law of Exponents
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

Quiz: Raising Products and Fractions to a Power
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

Quiz: The Power Rule of Exponents
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins 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 hrs 40 mins
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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Exponents in Geometry
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 15 mins Scoring: 12 points

LESSON 6: WHAT IS A MONOMIAL?

Study: What Is a Monomial?
Explore the world of monomials.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Practice: Algebra Tiles Tool
Use an algebra tiles tool to investigate monomials.
Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: What Is a Monomial?
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: EXPONENTIAL FUNCTIONS

Study: Exponential Functions
Define the standard form of an exponential function and explore a variety of its applications, such as exponential growth and decay (in the forms of doubling time and half-life), as well as compound interest. Compare compound interest to continuously compounded interest, using the irrational number $e$.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Evaluating Exponential Functions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Calculating Exponential Growth
Take a quiz to assess your understanding of the material.
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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Graphs of Exponential Functions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Geometric Sequences
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 26 points

Quiz: Formulas for Geometric Sequences
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Quiz: Finding Products of Binomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

Quiz: Finding the Product of Two Binomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: The FOIL Method
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Polynomial Multiplication
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 22 points

Quiz: Polynomial Multiplication (Advanced)
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

LESSON 3: WHY FACTOR?

Study: Why Factor?
Learn about composite numbers, reducible polynomials, and the zero product rule.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Factoring Polynomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins
Quiz: Binomial Factors of Trinomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Factoring Trinomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Factoring Trinomials (Basic)
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Factoring Trinomials (Advanced)
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Factoring a Difference of Squares
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Factoring Perfect Square Trinomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Sum or Difference of Two Cubes
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems

Florida Algebra I (2016)
Copyright © 2017 Apex Learning Inc. Apex Learning® and the Apex Learning logo are registered trademarks of Apex Learning Inc.
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

**Quiz: Factoring with the Zero Product Rule**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

**Quiz: Converting Quadratics to Standard Form**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

**Quiz: Quadratics with Perfect Square Trinomials**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

**Checkup: Practice Problems**
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

**Quiz: Completing the Square**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 24 points

**Quiz: Completing the Square (Advanced)**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

**Checkup: Practice Problems**
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

**Quiz: Complex Numbers and Discriminants**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

**Quiz: The Quadratic Formula**
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 30 mins 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.
Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Solving Quadratic Equations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Factoring by Graphing
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

Quiz: Factoring by Graphing (Advanced)
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Graphs of Quadratic Functions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Working with the Discriminant
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Simplifying Products of Radicals
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Simplifying Quotients of Radicals
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Multiplying Radicals
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Dividing Radicals
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Adding and Subtracting Radicals
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Rationalizing Denominators
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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.
Duration: 0 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving Radical Equations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

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 hrs 40 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Rational Expressions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkout: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Simplifying Rational Expressions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkout: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Multiplying Rational Expressions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 18 points

Quiz: Dividing Rational Expressions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkout: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Adding and Subtracting Rational Expressions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins
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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Advanced Proportions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: RATIONAL EQUATIONS

Study: Rational Equations
Learn how to solve simple rational equations.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Rational Equations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Rational Functions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

LESSON 9: RATIONAL EXPRESSIONS AND EQUATIONS WRAP-UP

Test (CS): Rational Expressions and Equations
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 hrs 40 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Reading and Using Matrices
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 22 points

Quiz: Solving with a Matrix
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving Three-Variable Systems with Matrices
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins

Checkup: Lessons Learned
Complete a set of practice problems on linear systems.
Duration: 0 hrs 30 mins

Quiz: Linear Systems
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 40 mins 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 hrs 40 mins
Checkup: Lessons Learned
Complete a set of practice problems on transformations.
Duration: 0 hrs 30 mins

Quiz: Transformations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 40 mins Scoring: 20 points

LESSON 5: TRANSFORMATIONS

Study: Transformations
Learn about general transformations of the graph of a function.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Transformations
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins 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 hrs 40 mins 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