Mathematics for College Success provides a math curriculum focused on developing the mastery of skills identified as critical to postsecondary readiness in math. This single-semester elective is aligned with Florida's Postsecondary Readiness Competencies in mathematics and targets students who are required to complete additional instruction based on their performance on the Postsecondary Education Readiness Test (PERT).

Course topics include a review of algebra concepts; functions and sequences; systems of equations; polynomials; factoring quadratic expressions; rational expressions; and data analysis.

Throughout the course, students are supplied with scaffolded note-taking guides, called Study Sheets, as well as post-study Checkup activities that provide them the opportunity to hone their computational skills by working through a low-stakes, 10-question problem set before moving on to formal assessment. Formative assessments help students to understand areas of weakness and improve performance, while summative assessments chart progress and skill development.

The course is built to Florida Postsecondary Readiness Competencies.

Length: One semester

UNIT 1: REVIEW OF ALGEBRA CONCEPTS

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 50 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Types of Numbers
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 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: THE OPERATIONS ON A NUMBER LINE

Study: The Operations on a Number Line
Explore using a number line to evaluate numerical expressions.
Duration: 0 hrs 40 mins

LESSON 3: INTEGERS AND OPERATIONS

Study: Integers and Operations
Use properties of operations and the order of operations to evaluate expressions involving integers. Learn about reverse operations, absolute value, and how to represent absolute values on a number line. Recognize and acquire a basic understanding of exponents.
Duration: 0 hrs 50 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: Properties of Operations

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Order of Operations

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: FRACTIONS, DECIMALS, AND PERCENTS

Study: Fractions, Decimals, and Percents

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 50 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 20 mins Scoring: 16 points

Quiz: Equivalent Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: OPERATIONS WITH EXPONENTS

Study: Operations with Exponents

Learn about evaluating expressions with exponents using the order of operations.

Duration: 0 hrs 50 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Operations with Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Operations with Radicals

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Scientific Notation

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Exponents in Geometry

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

Duration: 0 hrs 10 mins Scoring: 10 points

LESSON 6: VARIABLES AND PROBLEM SOLVING

Study: Variables and Problem Solving

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

Duration: 0 hrs 50 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: Variable Expressions

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

Duration: 0 hrs 25 mins Scoring: 20 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 7: SOLVING WITH ADDITION, SUBTRACTION, MULTIPLICATION, AND DIVISION

Study: Solving with Addition, Subtraction, Multiplication, and Division

Review how to isolate variables and solve simple equations and inequalities using properties of addition, subtraction, multiplication and division. Identify solution sets for inequalities using a number line.

Duration: 0 hrs 30 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Using Operations to Solve Equalities

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Using Operations to Solve Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

LESSON 8: SOLVING MULTISTEP LINEAR EQUATIONS

Study: Solving Multistep Linear Equations

Solve multistep equations, including equations that have no solutions, one solution, or an infinite number of solutions. Write and solve equations that model real-world situations.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Multistep Linear Equations

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 9: SOLVING LINEAR INEQUALITIES

Study: Solving Linear Inequalities

Solve multistep inequalities, including those that involve collecting like terms.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Linear Inequalities

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 10: PERCENTAGES AND COMMISSION

Study: Percentages and Commission

Understand how to use percentages to calculate commission pay with the formula $C = prn$.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Percentages and Commission

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 11: SALES TAX

Study: Sales Tax

Learn how to calculate sales tax based on percentages. Consider various state sales taxes and practice calculating totals while taking exempt items into account.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Sales Tax

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 12: REVIEW OF ALGEBRA CONCEPTS WRAP-UP

Test (CS): Review of Algebra Concepts

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

Duration: 1 hr Scoring: 75 points

UNIT 2: RATIOS, RATES, AND PROPORTIONS

LESSON 1: ESTIMATION AND SCALE

Study: Estimation and Scale

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

Duration: 0 hrs 40 mins

Checkup: Practice Problems

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

Duration: 0 hrs 30 mins

Quiz: Estimation and Scale

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

LESSON 2: PRECISION IN MEASUREMENT

Study: Precision in Measurement

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

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: Precision and Accuracy

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Significant Figures

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

LESSON 3: 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 4: MEASUREMENT CONVERSIONS

Study: Measurement Conversions

Use conversions between measurement systems to solve problems in real-world situations.

Duration: 0 hrs 50 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: Measurement Conversions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 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 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 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: PROPORTIONS

Study: Proportions

Use ratios to define proportions and solve problems involving proportions.

Duration: 0 hrs 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Proportions

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 30 mins

Checkup: Practice Problems

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

Duration: 0 hrs 20 mins

Quiz: Rates

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 8 points

LESSON 8: RATIOS, RATES, AND PROPORTIONS WRAP-UP

Test (CS): Ratios, Rates and Proportions

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

Duration: 1 hr Scoring: 75 points

UNIT 3: FUNCTIONS

LESSON 1: DOMAIN AND RANGE

Study: Domain and Range

Understand the meanings of the domain and range of a function. Use function notation and evaluate a function for a given value in its domain.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Domain and Range

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: IDENTIFYING FUNCTIONS

Study: Identifying Functions

Determine whether relations represented by graphs or tables of values are functions. Identify the domain and range of a function from an input-output table.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Identifying Functions

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: GRAPHS OF FUNCTIONS

Study: Graphs of Functions

Determine the domain and range of a function from its graph. Identify sections where a graph is increasing, decreasing, or

remaining constant.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Graphs of Functions

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: ADDING AND SUBTRACTING FUNCTIONS

Study: Adding and Subtracting Functions

Learn how to add and subtract functions.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Adding and Subtracting Functions

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: FUNCTIONS WRAP-UP

Test (CS): Functions

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

Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 4: LINEAR EQUATIONS

LESSON 1: SLOPE

Study: Slope

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

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Slope

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

Duration: 0 hrs 25 mins Scoring: 20 points

Journal: Slope

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

Duration: 0 hrs 45 mins Scoring: 20 points

LESSON 2: SLOPE-INTERCEPT EQUATION OF A LINE

Study: Slope-Intercept Equation of a Line

Learn to use the slope and y-intercept of a line to write its slope-intercept equation. Understand the meaning of the slope and y-intercept in slope-intercept equations that model real-world situations.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Slope-Intercept Equation of a Line

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: POINT-SLOPE EQUATION OF A LINE

Study: Point-Slope Equation of a Line

Write point-slope equations for lines given a point and the slope or two points. Rewrite point-slope equations in slope-intercept form.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Point-Slope Equation of a Line

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: PARALLEL AND PERPENDICULAR LINES

Study: Parallel and Perpendicular Lines

Learn about parallel and perpendicular lines and the relationships between their slopes. Write equations for lines perpendicular and parallel to given lines.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Parallel and Perpendicular Lines

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: LINEAR INEQUALITIES

Study: Linear Inequalities

Learn how to graph the half-planes that represent solutions for linear inequalities.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Linear Inequalities

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: LINEAR EQUATIONS WRAP-UP

Test (CS): Linear Equations

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

Duration: 0 hrs 50 mins Scoring: 50 points

UNIT 5: TRANSFORMING FUNCTIONS

LESSON 1: PARENT FUNCTIONS

Study: Parent Functions

Learn about the properties and graphs of linear parent functions, quadratic parent functions, absolute value parent functions, and reciprocal parent functions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Parent Functions

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: 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 35 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Shifting Functions Vertically

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Shifting Functions Horizontally

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

Duration: 0 hrs 20 mins Scoring: 20 points

Quiz: Shifting Functions Vertically and Horizontally

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: 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 35 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Stretching Functions Vertically

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: TRANSFORMATION OF PARENT FUNCTIONS

Study: Transformation of Parent Functions

Learn how to perform vertical shifts, horizontal shifts, vertical stretches and compressions, horizontal stretches and compressions, and any combination of these transformations on parent functions.

Duration: 0 hrs 35 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Transformation of Parent Functions

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

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 5: ARITHMETIC OF FUNCTIONS

Study: Arithmetic of Functions

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

Duration: 0 hrs 35 mins

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins

Quiz: Arithmetic of Functions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 6: TRANSFORMING FUNCTIONS WRAP-UP

Test (CS): Transforming Functions

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

Duration: 0 hrs 40 mins Scoring: 50 points

UNIT 6: SYSTEMS OF LINEAR EQUATIONS

LESSON 1: TWO-VARIABLE SYSTEMS: GRAPHING

Study: Two-Variable Systems: Graphing

Use graphing to solve two-variable systems of linear equations. Explore what it means for a linear system to have no solution, one solution, or an infinite number of solutions.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Two-Variable Systems: Graphing

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: TWO-VARIABLE SYSTEMS: SUBSTITUTION

Study: Two-Variable Systems: Substitution

Use substitution to solve two-variable systems of linear equations.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Two-Variable Systems: Substitution

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: TWO-VARIABLE SYSTEMS: ELIMINATION

Study: Two-Variable Systems: Elimination

Use elimination to solve two-variable systems of linear equations.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Two-Variable Systems: Elimination

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: TWO-VARIABLE SYSTEMS OF INEQUALITIES

Study: Two-Variable Systems of Inequalities

Use graphing to solve two-variable systems of linear inequalities. Use what you know about solving systems of inequalities to solve a real-world problem where there are constraints (limitations) that restrict your options.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Two-Variable Systems of Inequalities

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

Duration: 0 hrs 25 mins Scoring: 20 points

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: 0 hrs 50 mins Scoring: 50 points

UNIT 7: POLYNOMIALS

LESSON 1: WHAT IS A POLYNOMIAL?

Study: What Is a Polynomial?

Learn the definitions for monomials, polynomials, constants, terms, coefficients, binomials, trinomials, and degree. Learn how to find the degree of polynomials.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: What Is a Polynomial?

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: ADDING AND SUBTRACTING POLYNOMIALS

Study: Adding and Subtracting Polynomials

Learn how to add and subtract polynomials by collecting like terms. Practice adding and subtracting polynomials both vertically and horizontally.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Adding and Subtracting Polynomials

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: MULTIPLYING BINOMIALS

Study: Multiplying Binomials

Learn how to multiply binomials using the distributive property. Use the FOIL mnemonic to help you multiply binomials.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Multiplying Binomials

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: MULTIPLYING POLYNOMIALS

Study: Multiplying Polynomials

Extend the use of the distributive property to multiply polynomials with more than two terms. Use a table to organize the multiplication of polynomials. Practice multiplying polynomials horizontally and vertically.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Multiplying Polynomials

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: GRAPHING POLYNOMIALS

Study: Graphing Polynomials

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

Duration: 0 hrs 40 mins

Checkup: Practice Problems

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

Duration: 0 hrs 30 mins

Quiz: Finding Extreme Values

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 24 points

Quiz: Finding Roots of Graphs

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 22 points

LESSON 6: POLYNOMIALS WRAP-UP

Test (CS): Polynomials

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

Duration: 1 hr Scoring: 75 points

UNIT 8: FACTORING QUADRATIC EXPRESSIONS

LESSON 1: 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 2: 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 3: GROUPING

Study: Grouping

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

Duration: 0 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 Grouping

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Finding GCFs of Polynomials

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 16 points

LESSON 4: FACTORING $X^2 + BX + C$

Study: Factoring $x^2 + bx + c$

Learn the definition of a quadratic trinomial. Learn how to factor quadratic trinomials when the coefficient of the x-squared term is 1.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Factoring $x^2 + bx + c$

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: FACTORING $AX^2 + BX + C$

Study: Factoring $ax^2 + bx + c$

Learn how to factor quadratic trinomials with leading coefficients other than 1.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Factoring $ax^2 + bx + c$

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: SPECIAL CASES

Study: Special Cases

Learn how to work with special cases of factoring. Learn definitions for a perfect square trinomial and a difference of two squares. Practice using strategies that will help you factor each of these special cases.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Special Cases

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: SOLVING WITH ROOTS AND POWERS

Study: Solving with Roots and Powers

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

Duration: 0 hrs 50 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 8: SOLVING QUADRATIC EQUATIONS

Study: Solving Quadratic Equations

Learn to solve quadratics in the form $x^2 = b$ by taking square roots. Use the zero product property to solve quadratic equations by factoring. Learn about standard form and rewrite quadratic equations in that form.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Solving Quadratic Equations

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 9: COMPLETING THE SQUARE

Study: Completing the Square

Learn the definition for a special case of factoring called completing the square. Explore the steps to complete a square and practice solving quadratic equations by using this way of factoring.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Completing the Square

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 10: THE QUADRATIC FORMULA

Study: The Quadratic Formula

Learn the derivation of the quadratic formula and see how it can be used to solve quadratic equations. Understand that the discriminant can be used to determine whether a quadratic equation has 0, 1, or 2 real solutions.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: The Quadratic Formula

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 11: 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. Understand vertex form and use it to identify the vertex of a quadratic function.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Graphs of Quadratic Functions

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

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 12: FACTORING QUADRATIC EXPRESSIONS WRAP-UP

Test (CS): Factoring Quadratic Expressions

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

Duration: 1 hr Scoring: 75 points

UNIT 9: RATIONAL AND RADICAL EXPRESSIONS

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 25 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

Checkup: Practice Problems

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

Duration: 0 hrs 25 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

Checkup: Practice Problems

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

Duration: 0 hrs 25 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

Checkup: Practice Problems

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

Duration: 0 hrs 25 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: RATIONAL EQUATIONS

Study: Rational Equations

Learn how to solve simple rational equations.

Duration: 0 hrs 50 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 6: 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 25 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 7: 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 25 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 8: 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 25 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 9: 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 25 mins

Quiz: Rationalizing Denominators

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

LESSON 10: 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 25 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 11: RATIONAL AND RADICAL EXPRESSIONS WRAP-UP

Test (CS): Rational and Radical Expressions

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

Duration: 1 hr Scoring: 75 points

UNIT 10: DATA ANALYSIS

LESSON 1: CATEGORICAL DATA

Study: Categorical Data

Learn how to construct and interpret bar charts, pie graphs, and comparative bar charts.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Categorical Data

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 2: MEASURES OF CENTER

Study: Measures of Center

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

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Measures of Center

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 3: BOX PLOTS

Study: Box Plots

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

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

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

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Box Plots

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 20 points

LESSON 4: TWO-VARIABLE DATA AND SCATTERPLOTS

Study: Two-Variable Data and Scatterplots

Create scatterplots for bivariate data and recognize positive and negative correlations. Use a calculator to find correlation coefficients, and understand what the result says about the strength of the correlation. Know that correlation does not imply causation.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Two-Variable Data and Scatterplots

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: FITTING LINEAR MODELS TO DATA

Study: Fitting Linear Models to Data

Find equations for best-fit lines (regression equations) by estimation and by using a calculator. Use regression equations to make predictions. Find residuals and residual plots and understand how they indicate whether or not a linear model is appropriate.

Duration: 0 hrs 45 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Fitting Linear Models to Data

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: DATA ANALYSIS WRAP-UP

Test (CS): Data Analysis

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

Duration: 1 hr Scoring: 75 points

UNIT 11: EXAM

LESSON 1: EXAM

Exam: Exam

Take a computer-scored exam to demonstrate your mastery of concepts and skills covered.

Duration: 1 hr Scoring: 200 points