

Mathematics for College Readiness provides a fourth-year math curriculum focused on developing the mastery of skills identified as critical to postsecondary readiness in math. This full-year course 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 solving equations with addition, subtraction, multiplication and division; fractions and decimals; inequalities; functions and sequences; systems of equations; polynomials; factoring quadratic equations; 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 the Florida Postsecondary Readiness Competencies.

Length: Two semesters

UNIT 1: INTEGERS AND OPERATIONS

- Lesson 1: Types of Numbers
- Lesson 2: Negative Numbers
- Lesson 3: Absolute Value
- Lesson 4: Adding and Subtracting Integers
- Lesson 5: Multiplying and Dividing Integers
- Lesson 6: Properties of Operations
- Lesson 7: Order of Operations
- Lesson 8: Number Lines and Inequalities
- Lesson 9: Problem Solving
- Lesson 10: Integers and Operations Wrap-Up

UNIT 2: MEASUREMENT

- Lesson 1: Metric and Customary Units
- Lesson 2: Converting Units
- Lesson 3: Estimation and Scale
- Lesson 4: Precision in Measurement
- Lesson 5: Applications of Measurement
- Lesson 6: Wrap-Up

UNIT 3: FOUNDATIONS OF ALGEBRA

- Lesson 1: Rational and Irrational Numbers
- Lesson 2: Algebraic Properties and Expressions
- Lesson 3: Solving Linear Equations
- Lesson 4: Foundations of Algebra Wrap-Up

UNIT 4: SOLVING EQUATIONS AND INEQUALITIES

- Lesson 1: Solving Multistep Linear Equations
- Lesson 2: Solving Linear Inequalities
- Lesson 3: Literal Equations

- Lesson 4: Measurement and Units
- Lesson 5: Performance Task: Problem Solving with Inequalities
- Lesson 6: Solving Equations and Inequalities Wrap-Up

UNIT 5: FUNCTIONS

- Lesson 1: Domain and Range
- Lesson 2: Identifying Functions
- Lesson 3: Graphs of Functions
- Lesson 4: Adding and Subtracting Functions
- Lesson 5: Functions Wrap-Up

UNIT 6: LINEAR EQUATIONS

- Lesson 1: Slope
- Lesson 2: Slope-Intercept Equation of a Line
- Lesson 3: Point-Slope Equation of a Line
- Lesson 4: Parallel and Perpendicular Lines
- Lesson 5: Linear Inequalities
- Lesson 6: Linear Equations Wrap-Up

UNIT 7: SYSTEMS OF LINEAR EQUATIONS

- Lesson 1: Two-Variable Systems: Graphing
- Lesson 2: Two-Variable Systems: Substitution
- Lesson 3: Two-Variable Systems: Elimination
- Lesson 4: Two-Variable Systems of Inequalities
- Lesson 5: Systems of Linear Equations Wrap-Up

UNIT 8: SEMESTER 1 WRAP-UP

- Lesson 1: Semester I Exam

UNIT 9: EXPONENTS AND EXPONENTIAL FUNCTIONS

- Lesson 1: Exponents
- Lesson 2: Exponential Functions
- Lesson 3: Graphs of Exponential Functions
- Lesson 4: Exponents and Exponential Functions Wrap-Up

UNIT 10: QUADRATIC FUNCTIONS

- Lesson 1: Factoring $x^2 + bx + c$
- Lesson 2: Factoring $ax^2 + bx + c$
- Lesson 3: Special Cases
- Lesson 4: Solving Quadratic Equations
- Lesson 5: Completing the Square
- Lesson 6: The Quadratic Formula
- Lesson 7: Graphs of Quadratic Functions
- Lesson 8: Quadratic Functions Wrap-Up

UNIT 11: MANIPULATING FUNCTIONS

- Lesson 1: Parent Functions
- Lesson 2: Shifting Functions
- Lesson 3: Stretching Functions Vertically
- Lesson 4: Transformation of Parent Functions
- Lesson 5: Arithmetic of Functions
- Lesson 6: Performance Task: Transforming Functions
- Lesson 7: Manipulating Functions Wrap-Up

UNIT 12: POLYNOMIAL FUNCTIONS

- Lesson 1: Polynomial Basics
- Lesson 2: Dividing Polynomials
- Lesson 3: Polynomial Functions
- Lesson 4: Graphing Polynomial Functions
- Lesson 5: Polynomial Identities
- Lesson 6: Transformations of Polynomial Functions
- Lesson 7: Polynomial Functions Wrap-Up

UNIT 13: RATIONAL EXPRESSIONS AND FUNCTIONS

- Lesson 1: Rational Expressions
- Lesson 2: Simplifying Rational Expressions
- Lesson 3: Multiplying and Dividing Rational Expressions
- Lesson 4: Adding and Subtracting Rational Expressions
- Lesson 5: Rational Equations
- Lesson 6: Solving Radical Equations
- Lesson 7: Rational Expressions Wrap-Up

UNIT 14: DATA AND MATHEMATICAL MODELING

- Lesson 1: Two-Way Frequency Tables
- Lesson 2: Two-Variable Data and Scatterplots
- Lesson 3: Fitting Linear Models to Data
- Lesson 4: Nonlinear Models
- Lesson 5: Data and Mathematical Modeling Wrap-Up

UNIT 15: SEMESTER 2 WRAP-UP

- Lesson 1: Semester 2 Exam