Math for College Readiness Scope and Sequence

Section 1: Rational Exponents and Radical Expressions

- Topic 1: Properties of Exponents
- Topic 2: Radical Expressions and Expressions with Rational Exponents
- Topic 3: Adding Expressions with Radicals and Rational Exponents
- Topic 4: More Operations with Radicals and Rational Exponents
- Topic 5: Operations with Rational and Irrational Numbers

Section 2: Operations with Polynomials

- Topic 1: Using Expressions to Represent Real-World Situations
- Topic 2: Understanding Polynomial Expressions
- Topic 3: Algebraic Expressions Using the Distributive Property
- Topic 4: Algebraic Expressions Using the Commutative and Associative Property
- Topic 5: Adding and Subtracting Functions
- Topic 6: Multiplying Functions
- Topic 7: Closure Property
- Topic 8: Properties of Exponents
- Topic 9: Radical Expressions and Expressions with Rational Exponents
- Topic 10: Adding Expressions with Radicals and Rational Exponents
- Topic 11: More Operations with Radicals and Rational Exponents
- Topic 12: Operations with Rational and Irrational Numbers

Section 3: Solving and Modeling with Linear Equations, Inequalities, and Systems

- Topic 1: Rate of Change of Linear Functions
- Topic 2: Interpreting Rate of Change and y-intercept in a Real-World Context Part 1
- Topic 3: Interpreting Rate of Change and y-intercept in a Real-World Context Part 2
- Topic 4: Introduction to Systems of Equations
- Topic 5: Finding Solution Sets to Systems of Equations Using Substitution and Graphing
- Topic 6: Using Equivalent Systems of Equations
- Topic 7: Finding Solution Sets to Systems of Equations Using Elimination
- Topic 8: Solution Sets to Inequalities with Two Variables
- Topic 9: Finding Solution Sets to Systems of Linear Inequalities

Section 4: Introduction to Functions

- Topic 1: Input and Output Values
- Topic 2: Representing, Naming, and Evaluating Functions
- Topic 3: Key Features of Graphs of Functions Part 1
- Topic 4: Key Features of Graphs of Functions Part 2
- Topic 5: Transformations of Functions
- Topic 6: Modeling with Functions

Section 5: Solving and Modeling Quadratic Functions – Part 1

- Topic 1: Real-World Examples of Quadratic Functions
- Topic 2: Factoring Quadratic Expressions
- Topic 3: Solving Quadratic Equations by Factoring

Topic 4: Solving Other Quadratic Equations by Factoring

Topic 5: Solving Quadratic Equations by Factoring – Special Cases

Topic 6: Solving Quadratic Equations by Taking Square Roots

Topic 7: Solving Quadratic Equations by Completing the Square

Topic 8: Deriving the Quadratic Formula

Topic 9: Solving Quadratic Equations Using the Quadratic Formula

Topic 10: Quadratic Functions in Action

Section 6: Solving and Modeling Quadratic Functions – Part 2

Topic 1: Observations from a Graph of a Quadratic Function

- Topic 2: Nature of the Solutions of Quadratic Equations and Functions
- Topic 3: Graphing Quadratic Functions Using a Table
- Topic 4: Graphing Quadratic Functions Using the Vertex and Intercepts
- Topic 5: Graphing Quadratic Functions Using Vertex Form Part 1
- Topic 6: Graphing Quadratic Functions Using Vertex Form Part 2
- Topic 7: Transformations of the Dependent Variable of Quadratic Functions
- Topic 8: Transformations of the Independent Variable of Quadratic Functions

Topic 9: Finding Solution Sets to Systems of Equations Using Tables of Values and Successive Approximations

Topic 10: Modeling with Functions

Section 7: Square Root, Cube Root, Piecewise, and Absolute Value Functions

Topic 1: Understanding Piecewise-Defined Functions

- Topic 2: Absolute Value Functions
- Topic 3: Graphing Power Functions Part 1
- Topic 4: Graphing Power Functions Part 2

Section 8: Statistics and Probability

- Topic 1: Dot Plots
- Topic 2: Histograms
- Topic 3: Box Plots Part 1
- Topic 4: Box Plots Part 2
- Topic 5: Measures of Center and Shapes of Distributions
- Topic 6: Measures of Spread Part 1
- Topic 7: Measures of Spread Part 2
- Topic 8: The Empirical Rule
- Topic 9: Outliers in Data Sets
- Topic 10: Sets and Venn Diagrams Part 1
- Topic 11: Sets and Venn Diagrams Part 2
- Topic 12: Probability and the Addition Rule Part 1
- Topic 13: Probability and the Addition Rule Part 2
- Topic 14: Probability and Independence