

Algebra 2 Scope & Sequence

★ Unit 1 | Intro to Functions & Systems

Topic 1.1: Key Features of Functions

Topic 1.2: Transformations of Functions

Topic 1.3: Piecewise-Defined Functions

Topic 1.4: Arithmetic Sequences

Topic 1.5: Solving Equations and Inequalities by Graphing

Topic 1.6: Linear Systems

★ Unit 2 | Quadratic Functions & Equations

Topic 2.1: Vertex Form of a Quadratic Function

Topic 2.2: Standard Form of a Quadratic Function

Topic 2.3: Factored Form of a Quadratic Functions

Topic 2.4: Completing the Square

Topic 2.5: Applying the Quadratic Formula

Topic 2.6: Complex Numbers and Operations

Topic 2.7: Linear-Quadratic Systems

★ Unit 3 | Polynomial Functions

Topic 3.1: Sketching Polynomial Functions

Topic 3.2: Transformations of Polynomial Functions

Topic 3.3: Applications with Dividing Polynomials

Topic 3.4: Zeros of Polynomial Functions (Factorable or Given 1 Zero)

Topic 3.5: Finding all Zeros of Polynomial Functions

★ Unit 4 | Rational Functions

Topic 4.1: Multiplying and Dividing Rational Expressions

Topic 4.2: Adding and Subtracting Rational Expressions

Topic 4.3: Complex Fractions

Topic 4.4: Solving Rational Equations

★ Unit 5 | Rational Exponents & Radical Functions

Topic 5.1: n th Roots, Radicals, and Rational Exponents

Topic 5.2: Properties of Exponents and Radicals

Topic 5.3: Graphing Radical Functions

Topic 5.4: Solving Radical Equations

Topic 5.5: Function Operations

Topic 5.6: Inverse Relations and Functions

★ **Unit 6 | Exponential and Logarithmic Functions**

Topic 6.1: Key Features of Exponential Functions

Topic 6.2: Exponential Models

Topic 6.3: Geometric Sequences

Topic 6.4: Using Logarithmic Form of an Exponential

Topic 6.5: Logarithmic Function

Topic 6.6: Properties of Logarithms

Topic 6.7: Solving Exponential Equations using Logarithms

★ **Unit 7 | Trigonometric Functions**

Topic 7.1: Angles and the Unit Circle

Topic 7.2: Evaluating Trigonometric Functions

Topic 7.3: Graphing Sine and Cosine Functions

Topic 7.4: Translating Trigonometric Functions

Topic 7.5: Graphing Other Trigonometric Functions