

Algebra 1 Curriculum Map

Chapter 1 – Functions

- Patterns / Growth
- Quadratic Functions – Graphs
- Cube Roots – Graphs
- Absolute Value – Graphs
- Evaluating functions / expressions
- Domain and Range

Chapter 2 – Linear Relationships

- Slope / Δy and Δx
- $y = mx + b$
- Equation given a slope and a point
- Equation given two points
- Equation from a table and a graph

Chapter 3 – Simplifying and Solving

- Simplifying Exponential Expressions
- Distributive Property
- Multiplying Binomials / Generic Rectangle
- Solving Equations – One-Variable
- Solving Equations – Multi-Variable

Chapter 4 – Systems of Equations

- Solving by Equal Values Method
- Solving by Graphing
- Solving by Substitution
- Solving by Elimination
- Word Problems

Chapter 9 – Solving Quadratics and Inequalities

- Solving Quadratic Equations
- Quadratic Formula
- Choosing a Strategy
- Solving Linear, One-Variable Inequalities
- Graphing two-variable Inequalities
- Graphing Linear and Non-Linear Inequalities
- Systems of Inequalities

Chapter 5 – Sequences

- Arithmetic Sequences / Linear Functions
- Geometric Sequences / Exponential Functions
- Sequences vs. Functions

Chapter 7 – Exponential Functions

- Investigating Exponential Functions
- Multiple Representations of Exponential Functions
- Applications of Exponential Growth
- Exponential Decay
- Curve-Fitting and Fractional Exponents
- Solve Systems of Exponential Functions Graphically

Chapter 8 – Quadratic Functions

- Greatest Common Factors
- Factoring with Generic Rectangles
- Factoring with Special Cases
- Factoring Completely
- Factoring Shortcuts
- Multiple Representations for Quadratic Functions
- Zero product Property
- Additional Ways to Find X-Intercepts
- Completing the Square

Chapter 10 – Solving Complex Equations

- Association in Two-Way Tables
- Solving by Rewriting
- Fraction Busters
- Multiple Methods for Solving Equations
- Determining the Number of Solutions
- Intersection of Two Functions
- Number of Parabola Intersections
- Solving Quadratic and Absolute Value Inequalities

Chapter 11 – Functions and Data

- Transforming Functions
- Inverse Functions
- Investigating Data Representations
- Comparing Data

Additional Topics

- Writing and Solving Proportions
- Simplifying Expressions
- Writing Algebraic Expressions
- Linear Regression
- Simple Probability
- Radical Expressions
- Data Analysis