Algebra 1 is a two-semester course that is 100% aligned to the South Carolina College- and Career-Ready Mathematics Standards. The course is designed to help students develop computational fluency, deepen their conceptual understanding, and apply mathematical processes. Students will explore linear, quadratic, and exponential relationships. They will also compare and transform functions; solve systems of linear equations; add, multiply, and factor polynomials; and model statistical data. The course supports student learning through guided instruction, interactive tools, and modeling and journal activities that provide opportunities for students to analyze real-world scenarios, construct arguments, critique reasoning, and communicate precisely.

There are no required materials for this course.

Length: Two Semesters

Unit 1: Solving Equations

- Solving Linear Equations
- Solving Multistep Linear Equations
- Solving Absolute Value Equations
- Literal Equations
- Performance Task: Problem Solving with Inequalities
- Solving Equations Wrap-Up

Unit 2: Functions

- Domain and Range
- Identifying Functions
- Graphs of Functions
- Functions Wrap-Up

Unit 3: Linear Equations

- Slope
- Slope-Intercept Equation of a Line
- Point-Slope Equation of a Line
- Parallel and Perpendicular Lines
- Linear Inequalities
- Linear Equations Wrap-Up

Unit 4: Systems of Linear Equations

- Two-Variable Systems: Graphing
- Two-Variable Systems: Substitution
- Two-Variable Systems: Elimination
- Two-Variable Systems of Inequalities
- Systems of Linear Equations Wrap-Up

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Unit 5: Exponents and Exponential Functions

- Exponents
- Radicals and Rational Exponents
- Exponential Functions
- Graphs of Exponential Functions
- Exponents and Exponential Functions Wrap-Up

Unit 6: Sequences and Functions

- Arithmetic Sequences
- Geometric Sequences
- Understanding Number Sequences
- Exponential and Linear Growth
- Sequences and Functions Wrap-Up

Unit 7: Semester 1 Exam

- Semester 1 Exam

Unit 8: Polynomials

- What Is a Polynomial?
- Adding and Subtracting Polynomials
- Multiplying Binomials
- Multiplying Polynomials
- Polynomials Wrap-Up

Unit 9: Factoring Polynomials

- GCF and Factoring by Grouping
- Factoring Trinomials, Part 1
- Factoring Trinomials, Part 2
- Special Cases
- Factoring and Graphing
- Factoring Polynomials Wrap-Up

Unit 10: Quadratic Equations and Functions

- Solving Quadratic Equations
- Completing the Square
- The Quadratic Formula
- Graphs of Quadratic Functions
- Nonlinear Systems of Equations
- Comparing Functions
- Performance Task: Pricing for Profit
- Quadratic Equations and Functions Wrap-Up

Unit 11: Transformations of Functions

- Parent Functions
- Shifting Functions
- Stretching and Compressing Functions

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- Transformations of Parent Functions
- Transformations of Functions Wrap-Up

Unit 12: Data and Mathematical Modeling

- Two-Variable Data and Scatterplots
- Fitting Linear Models to Data
- Two-Way Frequency Tables
- Data and Mathematical Modeling Wrap-Up

Unit 13: Semester 2 Exam

- Semester 2 Exam

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