



Algebra 1 Honors Year at a Glance

Scope and Sequence 2024 - 2025

Please Note: All standards in the state course description are designed to be learned by the end of the course. This guide represents a recommended timeline and sequence to be used voluntarily by teachers for planning purposes. Specific question regarding when content will be addressed in a specific course are best answered by the individual teacher.

Course Resources

Publisher Resource:

[Math Nation](#) (Clever – use your active directory; does not support Internet Explorer)

Supplemental Resources:

[Khan Academy](#) (Algebra 1; does not support Internet Explorer)

[Illustrative Mathematics](#) (Algebra 1; does not support Internet Explorer)

In Algebra 1 Honors, instructional time will emphasize five areas:

- (1) Performing operations with polynomials and radicals, and extending the Laws of Exponents to include rational exponents;
- (2) Extending understanding of functions to linear, quadratic and exponential functions and using them to model and analyze real-world relationships;
- (3) Solving quadratic equations in one variable and systems of linear equations and inequalities in two variables;
- (4) Building functions, identifying their key features and representing them in various ways; and
- (5) Representing and interpreting categorical and numerical data with one and two variables.



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Quarter 1 (August 12 – October 11)

Unit 1: Introduction to Functions

Students will begin to learn about parent functions, function notation, evaluating functions, using Laws of Exponents to connect expressions with fractional exponents to radical expressions, and operations with radicals.

Unit 2: Algebraic Expressions

Students will focus on applying Laws of Exponents to generate equivalent algebraic expressions. Students will use operations with radicals and Laws of Exponents to provide a foundation for adding, subtracting, multiplying, and dividing algebraic expressions.

Unit 3: Linear Functions

Students will be able to rearrange equations of lines, write equations of lines from tables, graphs, and written descriptions. Students will also be able to fit linear functions to bivariate numerical data and understand the statistical importance of correlations.

Quarter 2 (October 15 – December 20)

Unit 4: Key Features of Linear Functions

Students will be able to determine constraints, solve and compare problems of linear functions and write equations of parallel and perpendicular lines.

Unit 5: Solving Equations

Students will extend their understanding of solving multi-step linear equations to include writing and solving multi-step linear equations representing a real-world context. Students will also be able to write a system of equations for real-world contexts and solve systems of equations by graphing, substitution and elimination.

Unit 6: Linear Inequalities

Students will focus on applying their understanding of linear equations and systems of equations to linear inequalities and systems of inequalities.

Quarter 3 (January 6 – March 13)

Unit 7: Rewriting Polynomial Expressions

Students will factor perfect square trinomials and factor the difference of two squares.

Unit 8: Quadratic Functions

Students will begin to determine and interpret key features of quadratics from a graph. Students will also rewrite quadratic expressions in vertex form by completing the square.



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Unit 9: Writing and Solving Quadratic Equations

Students will use graphs, tables, and key features to write a quadratic function. Students will also solve quadratics by using the square root, completing the square, factoring.

Unit 10: Absolute Value Functions

Students will understand key features of quadratic functions to key features of absolute value functions. They will write and solve absolute value equations and connect the solutions of an absolute value equation to the graph while also relating each piece of an absolute value function to a linear equation.

Unit 11: Exponential Functions

Students will explore exponential functions using multiple representations to understand exponential growth and exponential decay. Students will also apply their knowledge to write the equation of an exponential relationship.

Quarter 4 (March 24 – May 30)

Unit 11: Exponential Functions

Students will explore exponential functions using multiple representations to understand exponential growth and exponential decay. Students will also apply their knowledge to write the equation of an exponential relationship.

Unit 12: Data Displays

Students will analyze numerical and categorical data that is displayed using multiple visual representations. Students will also use data to make predictions for a population and understand the correlation and causation.

Unit 13: Bring it Together

Students will review simple and compound interest, compare key features of functions, explore transformations of horizontal and vertical shifts, identify and interpret parts of an expression or equation, calculate and interpret average rate of change and combine functions.

Unit 14: Categorical Data

Students will construct and interpret two-way frequency tables and use the information to determine joint and marginal frequency as well as whether an association exists.

EOC Review

Students will spend time reviewing for their EOC. Passing this EOC is a graduation requirement.