

# Ridgefield Public Schools

## Algebra 1 in 9th Grade Curriculum at a Glance

### Overview

This course is the initial mathematics course in the college preparatory program. Topics include solving equations and inequalities, linear functions, systems of linear equations and inequalities, polynomials, factoring, solving quadratic equations, operations with square roots, and statistics. Problem solving techniques relating algebra to real-life applications are incorporated throughout the course. Students taking this course are expected to have proficient computational skills, especially with fractions and signed numbers, without the use of a calculator. A graphing calculator is required for this course.

Units of Study	
Unit 1:	Solving Equations and Inequalities <ul style="list-style-type: none"><li>● Linear Equations</li><li>● Absolute Value Equations</li><li>● Literal Equations</li><li>● Linear Inequalities</li><li>● Compound and Absolute Value Inequalities</li></ul>
Unit 2:	Relations and Functions <ul style="list-style-type: none"><li>● Functions</li><li>● Linear Functions</li><li>● Function Notation</li></ul>
Unit 3:	Linear Functions <ul style="list-style-type: none"><li>● Linear Equations in Standard Form</li><li>● Linear Equations in Slope-Intercept Form</li><li>● Linear Equations in Point-Slope Form</li><li>● Writing Equations of Parallel and Perpendicular Lines</li></ul>



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Unit 4:	Systems of Equations and Inequalities <ul style="list-style-type: none"><li>• Solving Systems of Equations (Including Special Cases)</li><li>• Linear Inequalities in Two Variables</li><li>• Systems of Linear Inequalities</li></ul>
Unit 5:	Polynomial Expressions <ul style="list-style-type: none"><li>• Properties of Exponents</li><li>• Adding and Subtracting Polynomial Expressions</li><li>• Multiplying Polynomial Expressions (Including Special Cases)</li></ul>
Unit 6:	Factoring Quadratic Expressions <ul style="list-style-type: none"><li>• Factoring using Greatest Common Factor</li><li>• Factoring Quadratic Trinomials</li><li>• Factoring Completely</li></ul>
Unit 7:	Quadratic Equations and Functions <ul style="list-style-type: none"><li>• Graphs of Quadratic Functions</li><li>• Solving Quadratic Equations by Graphing</li><li>• Solving Quadratic Equations by Factoring, Using Square Roots, and Using the Quadratic Formula</li></ul>
Unit 8:	Operations with Square Roots <ul style="list-style-type: none"><li>• Simplifying Square Roots Expressions</li><li>• Operations with Square Root Expressions</li></ul>
Unit 9:	Statistics <ul style="list-style-type: none"><li>• Measures of Center and Variation</li><li>• Analyzing Lines of Fit</li></ul>

