

Honors Algebra I
Curriculum Map

Units	Highlights
Unit 1: Verbal and Algebraic expressions and sentences/ equations	<ul style="list-style-type: none"> • Converting between algebraic expressions and verbal expressions • Converting between algebraic equations verbal sentences • Setting up application problems – define variables, write out equation. • Distributive property <p>Common Core: A-CED.1</p>
Unit 2: Solving linear equations	<ul style="list-style-type: none"> • Single step equations: additive inverse/ multiplicative inverse • Multi-step equations: distributing, combining like terms. • Variables on both sides of the equation • Ratios and proportions <p>Common Core: A-REI.3, A-CED.1</p>
Unit 3: Relations and Functions (Emphasis on linear functions)	<ul style="list-style-type: none"> • Relations and all its representations • Functions and all its representations • Graphing linear functions: table method • Domain and range • Zeros – from an equation and a graph <p>Common Core: F-IF.7a, F-IF.6, A-CED.2, F-IF.2</p>
Unit 4: Rate of change and Linear Functions	<ul style="list-style-type: none"> • Rate of change and slope • Finding slope from a table, graph, or equation • Graphing linear functions: slope method • Writing equations of lines in slope-intercept form • Parallel and perpendicular lines • Lines of best fit <p>Common Core: F-IF.7a, F-IF.6, A-CED.2, F-IF.2, S-ID.6c</p>
Unit 5: Systems of Linear Equations	<ul style="list-style-type: none"> • Graphing method • Substitution method • Linear combinations/ elimination method • Application problems <p>Common Core: A-REI.6</p>
Semester 2	Highlights
Unit 6: Exponents/RTD	<ul style="list-style-type: none"> • Properties of exponents • Equations with exponents • RTD word problems <p>Common Core: A-SSE.1,A-APR.1,A-REI.3</p>
Unit 7: Exponents Part II	<ul style="list-style-type: none"> • Rational exponents • Conversion: radical and exponential forms • Solving exponential equations • Add/subtract/multiply radical expressions. • Revisit single distributive property • Introduce double distributive property. • Conjugates

	Common Core: A-SSE.2, A-REI.2
Unit 8: Polynomials	<ul style="list-style-type: none"> • Adding/subtracting/multiplying • Classifying by number of terms and by highest degree • Revisit conjugates Common Core: A-SSE.1,A-APR.1,A-REI.3
Unit 9: Factoring Polynomial Expressions	<ul style="list-style-type: none"> • GCF/reverse distribute. • Difference of squares • Quadratic Trinomials: $a = 1$ and $a \neq 0,1$ Common Core: A-SSE.2,A-SSE.3a, A-REI.4b, A-APR.1
Unit 10: Solving Polynomial equations: Factoring	<ul style="list-style-type: none"> • Applying factoring methods to solving polynomial equations • Zero Product Property Common Core: A-SSE.2,A-SSE.3a, A-REI.4b, A-APR.1
Unit 11: Graphing Quadratic Functions	<ul style="list-style-type: none"> • From a graph: identify vertex, AOS, y-int, and zeros. • From equation: min or max value, vertex, domain, and range. • Graph a quadratic function: table method Common Core: A-REI.11, F-IF.7a
Unit 12: Solving quadratic equations	<ul style="list-style-type: none"> • Square Root Property • Quadratic Formula • Solving systems of linear and quadratic equations Common Core: A-REI. 4b
Unit 13: Functions Revisited	<ul style="list-style-type: none"> • Combinations • Compositions • Using graphs, tables, and equations Common Core: F-IF.2

What distinguishes this class from the regular Algebra I?

- Assessments --- will need to memorize all formulas.
- Problems ---- more special cases, more challenging
- Pacing --- faster
- For example: when the concept of lines of best fit is introduced, the summative assessments will be conducted differently: Algebra I will have data given to them that will fit each time of correlation and will not do the lines of best fit without a calculator whereas the honors will have to construct their own data tables representing each correlation and use both a calculator and no calculator to construct lines of best fit.