

Cornwall-Lebanon School District Curriculum Overview

Honors Algebra 2– 10th grade

36	length of time in weeks	Concepts & Competencies	Common Assessments	Academic Standards (PA Core if applicable)
Unit 1	3	<u>Equations, Inequalities and Problem Solving</u> Students will solve equations and inequalities including linear, literal, and absolute value. Students will apply these concepts to real world situations.	<ul style="list-style-type: none"> ➤ Algebra 1 Ready Check Test ➤ Solving Equations and Inequalities Quiz ➤ Test 	CC.2.1.HS.F.2 CC.2.2.HS.C.3 CC.2.2.HS.C.6 CC.2.2.HS.D.7 CC.2.2.HS.D.8 CC.2.2.HS.D.9 CC.2.2.HS.D.10
Unit 2	4	<u>Graphs & Functions</u> Students will state the domain and range of functions and graphs. Students will write linear equations, including parallel and perpendicular lines. Students will graph linear equations, piecewise functions, linear inequalities and absolute value functions. Students will apply these concepts to real world situations.	<ul style="list-style-type: none"> ➤ Writing Equations of Lines and Linear Regression Quiz ➤ Domain, range and graphing functions Quiz ➤ Graphing Inequalities, union and intersection Quiz ➤ Unit Test 	CC.2.1.HS.F.3 CC.2.2.HS.D.7 CC.2.2.HS.D.9 CC.2.2.HS.D.10 CC.2.2.HS.C.1 CC.2.2.HS.C.2 CC.2.2.HS.C.3 CC.2.2.HS.C.6 CC.2.4.HS.B.2 CC.2.4.HS.B.3
Unit 3	4	<u>Exponents, Polynomials, & Polynomials Functions,</u> Students will learn and apply properties of exponents. Students will add, subtract, and multiply polynomials. Students will factor polynomials, solve by factoring and apply these concepts to real world situations.	<ul style="list-style-type: none"> ➤ Properties of Exponents & Polynomials Quiz ➤ Marking Period 1 Exam (cumulative) ➤ Factoring Quiz ➤ Unit Test 	CC.2.1.HS.F.1 CC.2.1.HS.F.7 CC.2.2.HS.C.1 CC.2.2.HS.C.4 CC.2.2.HS.D.3
Unit 4	5	<u>Rational Expressions</u> Students will simplify and perform operations with rational expressions. Students will solve and graph rational equations. Students will apply these concepts to real world situations.	<ul style="list-style-type: none"> ➤ Multiplying & Dividing Rational Expressions Quiz ➤ Adding & Subtracting Rational Expressions Quiz 	CC.2.1.HS.F.2 CC.2.2.HS.D.1 CC.2.2.HS.D.6 CC.2.2.HS.D.9

		<ul style="list-style-type: none"> ➤ Solve Rational Equations Quiz ➤ Polynomial Division Quiz ➤ Rational Expressions & Equations Test ➤ Variation Quiz ➤ Graphing Rational Quiz 	
Unit 5	4	<p><u>Radical Expressions & Equations</u></p> <p>Students will simplify and perform operations with radical expressions. Students will solve radical equations. Students will simplify expressions involving complex numbers. Students will apply properties of rational exponents to simplify expressions.</p>	<ul style="list-style-type: none"> ➤ Simplifying radical expressions & Rational Exponents Quiz ➤ Midterm (cumulative) ➤ Operations with Radicals and Solving Radical Equations Quiz ➤ Complex Numbers Quiz ➤ Unit Test <p>CC.2.1.HS.F.1 CC.2.1.HS.F.2 CC.2.1.HS.F.6 CC.2.1.HS.F.7 CC.2.2.HS.C.4 CC.2.2.HS.D.1 CC.2.2.HS.D.6 CC.2.2.HS.D.8 CC.2.2.HS.D.9 CC.2.2.HS.D.10</p>
Unit 6	4	<p><u>Quadratics</u></p> <p>Students will solve quadratic equations by square root property or quadratic formula. Students will solve nonlinear inequalities in one variable. Students will graph quadratic equations. Students will apply these concepts to real world situations.</p>	<ul style="list-style-type: none"> ➤ Solving Quadratics Quiz ➤ Graphing Quadratics Quiz ➤ Applications of Quadratics Quiz ➤ Quadratics Test <p>CC.2.1.HS.F.7 CC.2.2.HS.C.5 CC.2.2.HS.D.4</p>
Unit 7	4	<p><u>Probability and Statistics</u></p> <p>Students will solve problems using the basic counting principal. Students will determine the probability and odds of an event and the probability of mutually inclusive and exclusive events. Students will calculate the central tendency and variation of data and represent the data graphically. Students will solve problems involving normally distributed data.</p>	<ul style="list-style-type: none"> ➤ Counting methods Quiz ➤ Probability Quiz ➤ Statistics Quiz ➤ Marking Period 3 Exam (cumulative) <p>CC2.4.HS.B.1 CC2.4.HS.B.6 CC2.4.HS.B.7</p>
Unit 8	4	<p><u>Exponential and Logarithmic Functions</u></p> <p>Students will evaluate functions and perform function operations. Students will find inverses of one to one functions. Students will simplify logarithmic expressions. Students will solve and graph logarithmic and exponential functions.</p>	<ul style="list-style-type: none"> ➤ Functions Quiz ➤ Logarithmic Functions Quiz ➤ Exponential and Logarithmic Test <p>CC.2.2.HS.C.2 CC.2.2.HS.C.4 CC.2.2.HS.C.5 CC.2.2.HS.D.8</p>

Unit 9	3	<u>Systems of Equations & Inequalities</u> Students will solve systems of equations graphically and algebraically. Students will solve systems of inequalities and linear programming. Students will apply these concepts to real world situations.	➤ Solving Systems of Equations Quiz ➤ Applications of Systems of Equations Quiz ➤ Systems of Inequalities & Linear Programming Quiz	CC.2.2.HS.C.3 CC.2.2.HS.C.6 CC.2.2.HS.D.9 CC.2.2.HS.D.10
Unit 10	1	<u>Conics</u> Students will define and graph a parabola when y is the independent variable. Students will define and graph a circle, ellipse and hyperbola.	➤ Define and Graph Conics Quiz ➤ Final Exam (cumulative	CC2.3.HS.A.10