

Algebra 1 Curriculum 2013-2014

	Unit Name	Content	Skills	Standards: Performance Indicators
September	The Real Numbers	<p>1) Types of numbers</p> <p>2) Radicals</p> <p>3) Dimensional Analysis</p> <p>4) Evaluating Expressions</p>	<p>1) a. Determining if a number is rational or irrational</p> <p style="padding-left: 20px;">b. Rational + Rational = Rational (Rational)(Rational) = Rational Rational + Irrational = Irrational (Rational)(Irrational) = Irrational</p> <p>2) a. Simplifying basic radicals</p> <p style="padding-left: 20px;">b. Between what two consecutive integers does $\sqrt{90}$ lie?</p> <p>3) Convert between units using dimensional analysis</p> <p>4) Evaluate expressions given values for the variables</p>	<p>N-RN.3</p> <p>N-Q.1</p> <p>N-Q.3</p>
October	Equations and Inequalities	<p>1) Properties of Numbers</p> <p>2) Solving equations</p> <p>3) Literal Equations</p> <p>4) Linear Word Problems</p>	<p>1) Differentiate between commutative, associative, distributive, and properties of equality</p> <p>2) Solve multi-step equations (including equations with fractions) while stating which properties are being used in each step</p> <p>3) Solve literal equations to get an indicated variable alone</p> <p>4) Write and solve equations from word problems including word problems with variables on both sides and linear consecutive integer word problems</p>	<p>A-REI.1</p> <p>A-REI.3</p> <p>A-CED.4</p> <p>A.CED.1</p>

	Linear Functions	5) Inequalities	5) a. Solve inequalities b. Graph solution on number line c. Understand that when dividing by a negative, the inequality sign is flipped.	
		6) Inequality word problems	6) Solve word problems involving inequalities	
		1) Define functions	1) a. Determine whether a set of point or a graph represents a function	F.IF.1
			b. Use the vertical line test to determine if a graph is a function	F.IF.2
				F.IF.4
		2) Function notation and evaluating	2) a. Understand that $f(x)$ is the same as y	F.IF.5
			b. Evaluate functions for a given value (if $f(x) = 2x - 4$, find $f(-3)$)	F.IF.6
		3) Slope	3) a. Find the slope of a line given two points	F.IF.7.a
			b. Find the slope of a line given a graph	F.IF.7.b
			c. Find the rate of change given a word problem	A-REI.10
4) Graphing Lines	4) a. Graph lines using the slope and y-intercept			
	b. Graph lines in $y=mx+b$ form using the calculator and copying the table			
	c. Graph lines that are <i>not</i> in $y=mx+b$ form			
5) Writing a function rule	5) a. Write a function rule given a word problem, then graph it using an appropriate domain			
	b. Write a function rule given a slope and			

		6) Piece-Wise Functions	<p>point/two points/table of values c. Write equations of parallel lines</p> <p>6) a. Interpret graphs of piece-wise functions b. Write a story to represent a graph/draw a graph to represent a story c. Graph piece-wise functions given equations</p>	
November	Systems of Equations	<p>1) Solving systems of linear equations</p> <p>2) Solving systems with multiple types of graphs</p>	<p>1) a. Solving systems graphically b. Solving systems by substitution c. Solving systems using elimination d. Solving linear word problem systems</p> <p>2) a. Graphing different types of equations (absolute value, exponential, etc) b. Solving systems with various graphs (parabola and line, absolute value and line) c. Basic transformations of various graphs</p>	<p>A-REI.5</p> <p>A-REI.6</p> <p>A-REI.11</p> <p>A-CED.2</p> <p>F-LE.1</p> <p>F-LE.5</p>
	Inequalities Mini Unit	<p>1) Graphing inequalities on coordinate plane</p> <p>2) Systems of inequalities</p>	<p>1) a. Graphing inequalities (dashed line vs. solid line, shading using test point))</p> <p>2) Graphing systems of inequalities and stating a point in the solution set</p>	A-REI.12

December	Polynomials	1) Properties of exponents	<p>1) a. Understand the properties of exponents when adding, subtracting, multiplying, and dividing polynomials</p> <p>b. Understand properties of negative exponents and zero exponents</p>	<p>A-SSE.1.a</p> <p>A-SSE.3.c</p> <p>A-APR.1</p>
January		2) Operations with polynomials	<p>2) a. Add and subtract polynomials</p> <p>b. Multiply polynomials using FOIL for binomials</p> <p>c. Multiply polynomials using the distributive property for larger polynomials</p> <p>d. Divide a polynomial by a monomial</p>	
		3) Factoring polynomials	<p>3) a. Factor polynomials by GCF</p> <p>b. Factor trinomials with a leading coefficient of 1</p> <p>c. Factor trinomials with a leading coefficient greater than 1.</p>	
February	Quadratics	1) Graphing quadratics	<p>1) a. Graph a quadratic equation on the coordinate plan</p> <p>b. Interpret the parts including minimums, maximums, increasing, decreasing, axis of symmetry, roots, etc.)</p>	<p>F-IF.7.a</p> <p>F-IF.8</p> <p>A-APR.3</p> <p>A-SSE.3.a</p>
March		2) Solving quadratics algebraically	<p>2) a. Solve quadratic equations by factoring (including consecutive integer problems)</p> <p>b. Given the zeroes, write the equation</p> <p>c. Solve quadratics by completing the square</p> <p>d. Solve quadratics using the quadratic formula</p>	<p>A-SSE.3.b</p> <p>A-CED.1</p> <p>A-CED.3</p> <p>A-REI.4.b</p>

April	Statistics	1) Measures of Central Tendency 2) Representations of Data 3) Regressions and Correlation Coefficient	1) a. Find and interpret the mean, median, and mode of a set of data 2) a. Histograms b. Dot Plots c. Box Plots and IQR d. Standard Deviation and spread e. Two-way frequency tables f. Scatterplots 3) a. Quadratic, exponential, and linear regressions b. Correlation coefficient c. Residuals on the calculator	S-ID.1 S-ID.2 S-ID.3 S-ID.4 S-ID.5 S-ID.9
	Sequences Mini Unit	1) Arithmetic and Geometric Sequences	1) a. Input/Output b. Define arithmetic/geometric sequences c. Recursive processes	F-BF.1 F-LE.2 F-IF.3
May	REVIEW			
June	REGENTS EXAM – JUNE 3, 2014			