2013 - 2014 Unit Goals for Algebra I

Unit 1:   Lesson 1-10

Goal #1:  I can interpret parts of an expression, suchs as terms, factors and coefficients. (A.SSE.1a)

Goal #2:  I can use the product property of exponents to transform expressions for exponential functions. (A.SSE.3c)

Goal #3:  I can solve simple expressions and/or equations using the order of operations.

Goal #4:  I can use units and unit conversion ratios to find the solution of multi-step problems, including choosing and interpreting scale factors. (N.Q.1)

Unit 2:  Lesson 11-20

Goal #1:  I can explain each step in solving a simple question or equation, assuming the original equation has a solution, and justify my solution. (A.REI.1)

Goal #2:  I can calculate the square root of a number without using a calculator.

Goal #3:  I can determine the theoretical probability of an event.

Goal #4:  I can use the structure of an expression to identify ways to rewrite it. (A.SSE.3)

Unit 3:  Lesson 21-30

Goal #1:  I can represent data by plotting it on a real number line (dot plots, histograms, and box plots).  (S.ID.1)

Goal #2:  I can differentiate between a function and a relation, stating that a function correlates one element of the domain with exactly one element of the range.  I can show that f(x) denotes the output of the input, x. (F.IF.1)

Goal #3:  I can solve linear equations in one variable (or possibly two), including equations with coefficients represented by letters (variables). (A.REI.3)

Goal #4:  I can graph functions and show key features of the graph by hand.  (F.IF.7)

Unit 4:  Lesson 31-40

Goal #1:  I can produce an simplified form of an expression to show and explain properties represented by the expression.  (A.SSE.3)

Goal #2:  I can use properties of exponents to transform expressions for exponential functions. (A.SSE.3c)

Goal #3:  I can interpret rational expressions that represent a quantity.  (A.SSE.1)

Unit 5:  Lesson 41-50

Goal #1:  I can calculate (using slope formula) and interpret the average rate of change of a function over a specified interval and estimate the rate of change from a graph.  (F.IF.6)

Goal #2:  I can translate between algebraic inequalities (words) and arithmetic inequalities (math terms).

Goal #3:  I can analyze measures of central tendency. (Mean, median, mode, etc.)

Goal #4:  I can graph the solutions of linear inequalities with two variables as the intersection of the corresponding half-planes. (A.REI.12)

Unit 6:  Lessons 51-60

Goal #1:  I can determine the equation of a line given two points.  (8.SP.3)

Goal #2:  I can construct and interpret scatter plots for to investigate patterns between two quantities.  I can find outliers and correlations. (8.SP.1)

Goal #3:  I can solve systems of linear equations exactly and approximately, focusing on linear equations with two variables. (A.REI.6)

Goal #4:  I can identify, write and graph direct variation equations.

Goal #5:  I can add, subtract and multiply polynomials. (A.APR.1)

Unit 7:  Lessons 61-70

Goal #1:  I can simplify radical expressions.

Goal #2:  I can prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions. (Solve using elimination).  (A.REI.5)

Goal #3:  I can identify, write and graph inverse variation equations.

Goal #4:  I can write equations of parallel and perpendicular lines.

Unit 8:  Lessons 71-80

Goal #1:  I can informally assess the fit of a function by plotting and analyzing residuals.  I can fit a linear function for a scatter plot that suggests a linear association.  (S.ID.6b,c)(8.SP.2)

Goal #2:  I can factor a quadratic expression to reveal the zeros (solutions) of the function it defines.  (A.SSE.3a)

Goal #3:  I can graph rational functions (F.IF.7)

Goal #4:  I can calculate frequency distributions. (8.SP.4)

Unit 9:  Lessons 81-90

Goal #1:  I can graph quadratic functions. (F.IF.7a)

Goal #2:  I can apply the Pythagorean Theorem to determine unknown side lengths of right triangles. (8.G.7)

Goal #3:  I can apply the Pythagorean Theorem to find the distance between two points in a coordinate system. (8.G.8)

Unit 10:  Lessons 91-100

Goal #1:  I can solve absolute-value inequalities.

Goal #2:  I can simplify complex fractions.

Goal #3:  I can solve quadratic equations with one variable.  (A.REI.4)

Goal #4:  I can solve quadratic equations using graphs.  (F.IF.8a)

Unit 11:  Lessons 101-110

Goal #1:  I can solve quadratic equations by completing the square and using square roots.  (F.IF.8a)

Goal #2:  I can recognize and extend geometric sequences.  (F.BF.2)

Goal #3:  I can construct linear and exponential functions, including sequences.  (F.LE.2)

Goal #4:  I can distinguish between situations that can be modeled with linear functions and with exponential functions.  (F.LE.1)

Unit 12:  Lessons 111-120

Goal #1:  I can solve problems involving combinations and permutations.

Goal #2:  I can graph square root and cubic functions.  (F.IF.7b,e)

Goal #3:  I can solve simple and compound interest problems.  (A.CED.4)

Goal #4:  I can compare properties of two functions (linear, quadratic, exponential).  (F.IF.9)