September 5, 2012

Today we decided to take a step back from last week since last week did not seem productive. We decided to look at the common core standards within the Algebra Domain to identify which we cover or should/could cover in Algebra 1.

The list of what we believe is covered and should/could be covered is listed below:

**Interpret the structure of expressions**

A-SSE.1:

-Interpret parts of an expression, such as terms, factors, and coefficients

A-22E.2

**Write expressions in equivalent forms to solve problems**

A-SSE.3: Write expressions in equivalent forms to solve problems

-Factor a quadratic expression to reveal the zeros of the function it defines

*-Use the properties of exponents to transform expressions for exponential functions*

**Perform arithmetic operations on polynomials**

A-APR.1. -add, subtract, and multiply polynomials

**Understand the relationship between zeros and factors of polynomials**

A-APR.2.

A-APR.3. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by a polynomial (quadratics only)

**Use polynomial identities to solve problems**

A-APR.4.

A-APR.5

**Rewrite rational expressions**

A-APR.6.

A-APR.7

**Create equations that describe numbers or relationships**

A-CED.1. Create equations and inequalities in one variable and use them to solve problems.

A-CED.2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales

*A-CED.3. Represent constraints by equations or inequalities (domain…restrict to first quadrant with applications), and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context*

A-CED.4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations

**Understand solving equations as a process of reasoning and explain the reasoning**

*A-REI.1. Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.*

A-REI.2. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise

**Solve equations and inequalities in one variable**

A-REI.3. Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters

A-REI.4. Solve quadratic equations in one variable

-Solve quadratic equations by inspection taking square roots, the quadratic formula and factoring, as appropriate to the initial form of the equation

**Solve systems of equations**

A-REI.5. Prove that give 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

A-REI.6. Solve systems of linear equations exactly and approximately (with graphs) focusing on pairs of linear equations in two variables

A-REI.7

A-REI.8

A-REI.9

**Represent and solve equations and inequalities graphically**

*A-REI.10.* ***Understand*** *that the graph of an equation in two variables* ***is the set of all its solutions plotted in the coordinate plane****, often forming a curve*

*A-REI.11. Explain why the x-coordinates of the points where the graphs of the equations intersect are the solutions of the equation f(x) = g(x), find the solutions approximately using technology to graph the functions, make tables of values: Linear, quadratic*

A-REI.12. Graph the solutions to a linear inequality in two variables as a half-plane and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes