

## Algebra 1 2020

### Course Description:

Algebra I will provide students with CCR skills in the areas of fundamental operations over subsets of real numbers, the manipulation of algebraic expressions and the solution of algebraic sentences. Topics studied will include numbers and operations; algebraic relationships; geometric and spatial relationships; data and probability; and measurement. Algebra I is a foundation for subsequent high school mathematics courses. Students will take the Algebra EOC after completion of this course.

### Big Ideas:

1. A single quantity may be represented by many different expressions.
2. Solving an equation is the process of rewriting the equation to make what it says about its variable(s) as simple as possible. The numbers and types of solutions vary predictably, based on the type of equation.
3. Useful information about equations and inequalities (including solutions) can be found by analyzing graphs, tables and statistical data.
4. Many real-world mathematical problems can be represented algebraically. These representations can lead to algebraic solutions along with estimations and predictions about future occurrences.

### Essential Learner Outcomes:

ELO #	Essential Learner Outcome Description	Standard
1	Perform operations on polynomials	A1.APR.A
2	Use units to solve problems	A1.NQ.B
3	Understand solving equations as a process, and solve equations and inequalities in one variable	A1.REI.A
4	Understand the concept of a function and use function notation	A1.IF.A
5	Create Equations that describe linear, quadratic and exponential relationships	A1.CED.A
6	Interpret linear, quadratic, and exponential functions in terms of the context.	A1.IF.B
7	Analyze linear, quadratic, and exponential functions using different representations.	A1.IF.C
8	Build new functions from existing functions (limited to linear, quadratic and exponential)	A1.BF.A
9	Summarize, represent and interpret data.	A1.DS.A
10	Represent and solve linear and exponential equations and inequalities graphically	A1.REI.C
11	Solve Systems of equations	A1.REI.B
12	Extend and use properties of rational exponents	A1.NQ.A

<b>13</b>	Construct and compare linear, quadratic and exponential models and solve problems.	A1.LQE.A
<b>14</b>	Interpret and use structure	A1.SSE.A