

## Bloomfield Prioritized Standards Grades 9-12

### Algebra I

#### Number and Quantity

##### Quantities\*

##### Reason quantitatively and use units to solve problems.

**CC.9-12.N.Q.1** Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

#### Algebra

##### Seeing Structure in Expressions

##### Interpret the structure of expressions

**CC.9-12.A.SSE.1** Interpret expressions that represent a quantity in terms of its context.\*

#### Algebra

##### Creating Equations\*

##### Create equations that describe numbers or relationships

**CC.9-12.A.CED.1** Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*

**CC.9-12.A.CED.2** Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

**CC.9-12.A.CED.4** Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law  $V = IR$  to highlight resistance  $R$ .

#### Algebra

##### Reasoning with Equations and Inequalities

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

**CC.9-12.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.

#### Algebra

##### Reasoning with Equations and Inequalities

##### Represent and solve equations and inequalities graphically.

**CC.9-12.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 (which could be a line).

## Functions

### Interpreting Functions

#### Understand the concept of a function and use function notation

**CC.9-12.F.IF.1** Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If  $f$  is a function and  $x$  is an element of its domain, then  $f(x)$  denotes the output of  $f$  corresponding to the input  $x$ . The graph of  $f$  is the graph of the equation  $y = f(x)$ .

## Functions

### Interpreting Functions

#### Interpret functions that arise in applications in terms of the context. **CC.9-**

**12.F.IF.6** Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.\*

## Functions Overview

### Interpreting Functions

#### Analyze functions using different representations.

**CC.9-12.F.IF.9** Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.

## Functions

### Building Functions

#### Build a function that models a relationship between two quantities.

**CC.9-12.F.BF.1** Write a function that describes a relationship between two quantities.\*

## Functions

### Linear, Quadratic, and Exponential Models\*

#### Construct and compare linear, quadratic, and exponential models and solve problems.

**CC.9-12.F.LE.1** Distinguish between situations that can be modeled with linear functions and with exponential functions.

### CT Common Core

**CT.9-12.3.C.2.a.(1)** Interpret geometric relationships using algebraic equations and inequalities and vice versa.

**CT 9-12.3.C.3.a(1)** Select appropriate units, scales, degree of precision, and strategies to determine length, angle measure, perimeter, circumference and area of plane geometric figures.