**Fall Semester Test Study Guide**

**Algebra 1 – Mrs. Bauck**

**Chapter 1**

*Vocabulary*: Expression, Solve, Evaluate, Words that signal each operation, Absolute Value, Accuracy, Precision, Proportions, Unit Rate

* Write expressions in words and write expressions to match story problems
* Evaluate expressions
* Solve equations involving addition, subtraction, multiplication, division, and the distributive property with variables on one side and both sides; solve story problems involving these operations
* Solve equations involving absolute value
* Solve equations for a given variable
* Find unit rate
* Solve proportions using cross multiplication
* Know the difference between accuracy and precision
* Multiply percents and decimals by whole numbers

**Chapter 2**

*Vocabulary*: Inequalities, Compound Inequalities

* Describe the solutions to inequalities in words
* Graph inequalities and write inequalities to match graphs
* Solve inequalities involving addition, subtraction, multiplication, division, and the distributive property; know when you flip your inequality sign!
* Know how to write compound inequalities
* Solve and graph compound inequalities

**Chapter 3**

*Vocabulary*: Continuous graphs, Discrete graphs, Mapping Diagram, Domain, Range, Function, Relation, Function Notation, Scatterplot, Correlation, Arithmetic Sequence, Common Difference

* Know the difference between discrete and continuous graphs; know how each one could relate to a real-life situation
* Sketch graphs to match a given situation and match a given graph to a situation
* Put ordered pairs into a table, mapping diagram, and graph
* State the domain and range for a function; know when the domain and range need to be expressed as points or inequalities
* Determine whether a graph or a set of points is a function or not; know what the vertical line test is and how to use it
* Evaluate equations in function notation
* Graph a scatterplot given a table of data
* Know examples of positive, negative, and no correlation
* Use the arithmetic sequence formula to find terms in a sequence

**Chapter 4A & Chapter 4B**

*Vocabulary:* Linear, Linear Equation, Slope-Intercept Form, Point-Slope Form, Standard Form, Rise, Run, Slope, X-Intercept, Y-Intercept, Rate of Change, Direct Variation, Constant of Variation

* Graph functions given an equation in any form; use the intercepts in order to graph
* Know what a linear function looks like
* Find the x- and y-intercepts given a graph or linear equation
* Know what a positive, negative, zero, or undefined slope looks like
* Calculate the rate of change between each interval given a table
* Use the slope formula to find the slope of a line given two ordered pairs; find the slope of a line given a graph
* Determine whether an equation or set of ordered pairs represents a direct variation or not; find the constant of variation
* Given intercepts, slope, and/or coordinates, be able to write a linear equation in slope-intercept form, point-slope form, or standard form; rearrange a given linear equation into slope-intercept form, standard form, or direct variation format.