

Mathematics – Eighth Grade

Marking Period Four	The Number System	Expressions and Equations	Functions	Geometry	Statistics and Probability
<b>CCSS Cluster Statement</b>	Know that there are numbers that are not rational, and approximate them by rational numbers.	Work with radicals and integer exponents.	Define, evaluate and compare functions.	Understand congruence and similarity using physical models, transparencies or geometry software.	Investigate patterns of association in bivariate data.
<b>CCSS Standard</b>			1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. A.RP.08.04		1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association. D.AN.08.02
<b>Learning Target</b>			I can understand what a function is and I can graph the function using a table.		I can construct and interpret scatterplots. I can describe the patterns seen in the scatterplot.
<b>Power Standard</b>					

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<b>CCSS Standard</b>			2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change. A.PA.08.03		2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line. D.AN.08.01
<b>Learning Target</b>			I can use and understand all representations of linear functions.		I can find the line of best fit for a scatterplot and use it to assess the data.
<b>Power Standard</b>					

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<b>CCSS Standard</b>			<p>3. Interpret the equation <math>y = mx + b</math> as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function <math>A = s^2</math> giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.</p> <p>A.PA.08.02</p>		<p>3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.</p>
<b>Learning Target</b>			<p>I can interpret and graph a linear function.</p> <p>I can tell if a function is linear or not linear.</p>		<p>I can use a linear model to interpret real life situations.</p>
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<b>CCSS Standard</b>					4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?
<b>Learning Target</b>					I can recognize patterns in multiple sets of data.
<b>Power Standard</b>					

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<b>CCSS Standard</b>			4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values. A.RP.08.01		
<b>Learning Target</b>			I can solve real world problems involving rates.		
<b>Power Standard</b>			N.FL.08.11		

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<b>CCSS Standard</b>			5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally. A.PA.08.03		
<b>Learning Target</b>			I can describe a relationship between two quantities given a graph or I can make a graph given a situation.		
<b>Power Standard</b>					
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