

## Number Sense:

GRADE 6	GRADE 7	GRADE 8	
<b>MA.6.NS.1.a.1:</b> Understand the difference between a positive or negative number.	<b>MA.7.NS.1.a.1:</b> Determine the prime factorization of whole numbers.	<b>MA.8.NS.1.a.1:</b> Identify rational and irrational numbers.  <b>MA.8.NS.1.a.2:</b> Round real numbers to the hundredths place.	
<b>MA.6.NS.2.a.1:</b> Locate positive and negative numbers on a number line.	<b>MA.7.NS.2.a.1:</b> Identify perfect Squares.	<b>MA.8.NS.2.a.1:</b> Use the estimate of irrational numbers to locate them on a number line.	
<b>MA.6.NS.3.a.1:</b> Plot positive and negative integers on a number line.  <b>MA.6.NS.3.a.2:</b> Compare and order a given set of integers.	<b>MA.7.NS.3.a.1:</b> Understand the definition of rational and irrational numbers.  <b>MA.7.NS.3.a.2:</b> Order and compare rational and irrational numbers using a number line.	<b>MA.8.NS.3.a.1:</b> Use properties of integer exponents to produce equivalent expressions.	
<b>MA.6.NS.4.a.1:</b> Find the absolute value of a number using the distance from zero on a number line.		<b>MA.8.NS.4.a.1:</b> Solve equations using properties of square roots.	
<b>MA.6.NS.5.a.1:</b> Identify the decimal and percent equivalents for halves, fourths, fifths, and tenths.			
<b>MA.6.NS.6.a.1:</b> Identify a prime and composite number.			
<b>MA.6.NS.7.a.1:</b> Find the least common multiple.  <b>MA.6.NS.7.a.2:</b> Find the greatest common factor of two whole numbers.			
<b>MA.6.NS.8.a.1:</b> Describe the ratio relationship between two quantities.			
<b>MA.6.NS.9.a.1:</b> Understand the concept of a unit rate.			
<b>MA.6.NS.10.a.1:</b> Solve one-step real-world problems involving unit rates with ratios of whole numbers when given the unit rate (e.g., 3 inches of snow falls per hour, how much in 6 hours).			

## Computation:

GRADE 6	GRADE 7	GRADE 8	
<b>MA.6.C.1.a.1:</b> Divide multi-digit whole numbers.	<b>MA.7.C.1.a.1:</b> Add a positive and negative integer.	<b>MA.8.C.1.a.1:</b> Solve real-world problems with rational numbers by using two operations.	
<b>MA.6.C.2.a.1:</b> Solve one-step addition or subtraction problems with decimals.  <b>MA.6.C.2.a.2:</b> Solve one-step addition or subtraction problems with fractions.	<b>MA.7.C.2.a.1:</b> Subtract positive and negative integers.  <b>MA.7.C.2.a.2:</b> Find the distance between two rational numbers on a number line using absolute value.	<b>MA.8.C.2.a.1:</b> Perform operations with numbers expressed in scientific notation.	
<b>MA.6.C.3.a.1:</b> Solve one-step real-world addition or subtraction problems with decimals or fractions.	<b>MA.7.C.3.a.1:</b> Solve multiplication problems with positive and negative integers.	<b>8.RL.2.3:</b>	
<b>MA.6.C.4.a.1:</b> Solve one-step division problems with fractions.	<b>MA.7.C.4.a.1:</b> Solve division problems with positive and negative integers.		
<b>MA.6.C.5.a.1:</b> Demonstrate what an exponent represents (e.g., $8^3 = 8 \times 8 \times 8$ ) and evaluate	<b>MA.7.C.5.a.1:</b> Determine unit rates given a ratio of lengths, areas, and other quantities measured in like units.		
<b>MA.6.C.6.a.1:</b> Apply the order of operations.	<b>MA.7.C.6.a.1:</b> Use proportions to solve ratio problems.  <b>MA.7.C.6.a.2:</b> Solve word problems involving ratios.  <b>MA.7.C.6.a.3:</b> Use proportional relationships to solve multi-step percent problems.		
	<b>MA.7.C.7.a.1:</b> Compute with rational numbers.		
	<b>MA.7.C.8.a.1:</b> Using one operation, solve real-world problems involving rational numbers.		

## Algebra and Functions:

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<b>MA.6.AF.1.a.1:</b> Given a real-world problem, evaluate the expressions for specific values of their variables.	<b>MA.7.AF.1.a.1:</b> Use properties of operations to produce equivalent linear expressions.	<b>MA.8.AF.1.a.1:</b> Solve linear equations with two steps based on real world problems.	
<b>MA.6.AF.2.a.1:</b> Use properties of operations to produce equivalent expressions.	<p><b>MA.7.AF.2.a.1:</b> Solve equations with up to two steps based on real-world problems.</p> <p><b>MA.7.AF.2.a.2:</b> Use variables to represent quantities in a real-world or mathematical problem to solve linear equations.</p>	<b>MA.8.AF.2.a.1:</b> Recognize when a linear equation has one solution, infinitely many solutions, or no solutions.	
<b>MA.6.AF.3.a.1:</b> Write and evaluate variable expressions.	<p><b>MA.7.AF.3.a.1:</b> Solve inequalities with up to two variables based on real-world problems.</p> <p><b>MA.7.AF.3.a.2:</b> Use variables to represent quantities in a real-world or mathematical problem to solve linear inequalities.</p> <p><b>MA.7.AF.3.a.3:</b> Determine the graph of an inequality.</p>	<b>MA.8.AF.3.a.1:</b> Distinguish between functions and non-functions in graphs, or tables.	
<b>MA.6.AF.4.a.1:</b> Use substitution to determine Validity of an equation or inequality.	<p><b>MA.7.AF.4.a.1:</b> Relate slope to rate of change between two variables.</p> <p><b>MA.7.AF.4.a.2:</b> Using real-world examples, recognize the graph that shows the correct slope between two variables.</p>	<p><b>MA.8.AF.4.a.1:</b> Given a graph, describe the defining features of a function.</p> <p><b>MA.8.AF.4.a.2:</b> Given a verbal situation, identify its corresponding graph.</p> <p><b>MA.8.AF.4.a.3:</b> Given a line graph of a situation, describe or select its qualitative features.</p>	
<b>MA.6.AF.5.a.1:</b> Solve real-world one-step linear equations.	<p><b>MA.7.AF.5.a.1:</b> Graph a line using slope and a point on the line.</p> <p><b>MA.7.AF.5.a.2:</b> Understand how to calculate the slope of a line.</p>	<b>MA.8.AF.5.a.1:</b> Given multiple representations, describe a function as linear and not linear.	

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<p><b>MA.6.AF.6.a.1:</b> Given a real-world problem, write an inequality.</p>	<p><b>MA.7.AF.6.a.1:</b> Identify if the relationship is proportional between two quantities in a table.</p> <p><b>MA.7.AF.6.a.2:</b> Determine if two quantities are in a Proportional relationship using points graphed on a coordinate plane.</p>	<p><b>MA.8.AF.6.a.1:</b> Identify the rate of change (slope) and initial value (y-intercept) from graphs.</p>	
<p><b>MA.6.AF.7.a.1:</b> Graph a point on a coordinate plane.</p>	<p><b>MA.7.AF.7.a.1:</b> Given a table or a graph of a line, identify the unit rate.</p>	<p><b>MA.8.AF.7.a.1:</b> Given a table or a graph, compare two linear functions to answer a question about rates.</p>	
<p><b>MA.6.AF.8.a.1:</b> Given a coordinate plane, plot and find the distance between two points with the same first coordinate or the same second coordinate.</p>	<p><b>MA.7.AF.8.a.1:</b> Given a proportional relationship, explain the meaning of the coordinates on the graph.</p>	<p><b>MA.8.AF.8.a.1:</b> Given a graph, identify the solution to a system of linear equations.</p>	
<p><b>MA.6.AF.9.a.1:</b> Analyze a table to find missing values of ordered pairs.</p> <p><b>MA.6.AF.9.a.2:</b> Plot pairs of values from a table onto a coordinate plane.</p>	<p><b>MA.7.AF.9.a.1:</b> Represent proportional relationships as an equation and as a graph.</p>		
<p><b>MA.6.AF.10.a.1:</b> Given a real-world problem representing a proportional relationship, analyze the relationships between the dependent and independent variables.</p>			

## Geometry and Measurement:

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<b>MA.6.GM.1.a.1:</b> Convert between English and metric measurement systems.	<b>7.RL.4.1:</b>	<b>MA.8.GM.1.a.1:</b> Identify and describe attributes of three-dimensional geometric objects.	
<b>MA.6.GM.2.a.1:</b> Given a real-world situation, use the sum of the interior angles of a triangle which totals 180 degrees.	<b>MA.7.GM.2.a.1:</b> Identify similar polygons.	<b>MA.8.GM.2.a.1:</b> Apply the formula to find the volume of three-dimensional shapes (e.g., cubes, spheres, and cylinders).	
<b>MA.6.GM.3.a.1:</b> Given a polygon in a coordinate plane, find the length of each side.	<b>MA.7.GM.3.a.1:</b> When given a real-world situation, determine the appropriate scale.	<b>MA.8.GM.3.a.1:</b> Recognize a rotation, reflection, or translation of a figure.	
<b>MA.6.GM.4.a.1:</b> Find area of quadrilaterals.	<b>MA.7.GM.4.a.1:</b> Identify various angles in a real-world situation.	<b>MA.8.GM.4.a.1:</b> Describe a sequence of transformations between two congruent figures.	
<b>MA.6.GM.5.a.1:</b> Find the volume of right rectangular prisms.  <b>MA.6.GM.5.a.2:</b> Understand the concept of volume and how it fills space.	<b>MA.7.GM.5.a.1:</b> Understand the formulas to calculate the area and circumference of a circle.	<b>MA.8.GM.5.a.1:</b> Describe a sequence of transformations between two similar figures.	
	<b>MA.7.GM.6.a.1:</b> Given a model and an equation with all variables given, find the volume of a cylinder.	<b>MA.8.GM.6.a.1:</b> Describe the effects of transformations on the coordinates of a figure.	
	<b>MA.7.GM.7.a.1:</b> Understand surface area and identify it in a real-world situation.	<b>MA.8.GM.7.a.1:</b> Given the lengths of the sides of a right triangle, determine which one must be the hypotenuse	
		<b>MA.8.GM.8.a.1:</b> Apply the Pythagorean Theorem to determine lengths/distances in real-world situations.  <b>MA.8.GM.8.a.2:</b> Find the hypotenuse of a right triangle using the Pythagorean Theorem.	
		<b>MA.8.GM.9.a.1:</b> Apply the Pythagorean Theorem to determine lengths/distances on a coordinate plane.	

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## Data Analysis Statistics (Data Analysis, Statistics & Probability – Grade 7 & 8):

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<b>MA.6.DS.1.a.1:</b> Identify statistical questions and the data that corresponds.	<b>MA.7.DSP.1.a.1:</b> Determine sample size to answer a given question.	<b>MA.8.DSP.1.a.1:</b> Graph bivariate data using scatter plots and identify possible associations between the variables.  <b>MA.8.DSP.1.a.2:</b> Using scatter plots, identify data points that appear to be outliers.	
<b>MA.6.DS.2.a.1:</b> Name different graphical representations of data.	<b>MA.7.DSP.2.a.1:</b> Interpret data to draw conclusions.	<b>MA.8.DSP.2.a.1:</b> Identify a linear association when analyzing bivariate data on a scatter plot.	
<b>MA.6.DS.3.a.1:</b> Collect and graph data using bar graphs and line plots.	<b>MA.7.DSP.3.a.1:</b> Identify the range, median, mean, or mode of a given data set.  <b>MA.7.DSP.3.a.2:</b> Compare two similar populations/models to draw a conclusion.  <b>MA.7.DSP.3.a.3:</b> Make or select an appropriate statement based on two unequal data sets using measure of central tendency and shape.	<b>MA.8.DSP.3.a.1:</b> Use the line of best fit to find a point that answers a question about the data.	
<b>MA.6.DS.4.a.1:</b> Select a statement that matches mean, mode, and spread of data for 1 measure of central tendency for a given data set.	<b>MA.7.DSP.4.a.1:</b> Make or select a statement to compare the distribution of two data sets.	<b>MA.8.DSP.4.a.1:</b> Determine the probability of simple events.	
	<b>MA.7.DSP.5.a.1:</b> Describe the probability of events as being certain or impossible.	<b>MA.8.DSP.5.a.1:</b> Determine the theoretical probability of multi-stage probability experiments (2 coins, 2 dice).	
	<b>MA.7.DSP.6.a.1:</b> Make a prediction regarding the probability of an event occurring; conduct simple probability experiments.	<b>MA.8.DSP.6.a.1:</b> Use the multiplication counting principle to determine the total number of outcomes.	
	<b>MA.7.DSP.7.a.1:</b> Compare actual results of simple experiments with theoretical probabilities.		

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<p><b>MA.6.DS.1.a.1:</b> Identify statistical questions and the data that corresponds.</p>	<p><b>MA.7.DSP.1.a.1:</b> Determine sample size to answer a given question.</p>	<p><b>MA.8.DSP.1.a.1:</b> Graph bivariate data using scatter plots and identify possible associations between the variables.</p> <p><b>MA.8.DSP.1.a.2:</b> Using scatter plots, identify data points that appear to be outliers.</p>	
<p><b>MA.6.DS.2.a.1:</b> Name different graphical representations of data.</p>	<p><b>MA.7.DSP.2.a.1:</b> Interpret data to draw conclusions.</p>	<p><b>MA.8.DSP.2.a.1:</b> Identify a linear association when analyzing bivariate data on a scatter plot.</p>	
<p><b>MA.6.DS.3.a.1:</b> Collect and graph data using bar graphs and line plots.</p>	<p><b>MA.7.DSP.3.a.1:</b> Identify the range, median, mean, or mode of a given data set.</p> <p><b>MA.7.DSP.3.a.2:</b> Compare two similar populations/models to draw a conclusion.</p> <p><b>MA.7.DSP.3.a.3:</b> Make or select an appropriate statement based on two unequal data sets using measure of central tendency and shape.</p>	<p><b>MA.8.DSP.3.a.1:</b> Use the line of best fit to find a point that answers a question about the data.</p>	

## Data Analysis, Statistics & Probability (Grade 7):

GRADE 6	GRADE 7	GRADE 8	
	<b>MA.7.DSP.1.a.1:</b> Determine sample size to answer a given question.		
	<b>MA.7.DSP.2.a.1:</b> Interpret data to draw conclusions.		
	<p><b>MA.7.DSP.3.a.1:</b> Identify the range, median, mean, or mode of a given data set.</p> <p><b>MA.7.DSP.3.a.2:</b> Compare two similar populations/models to draw a conclusion.</p> <p><b>MA.7.DSP.3.a.3:</b> Make or select an appropriate statement based on two unequal data sets using measure of central tendency and shape.</p>		
	<b>MA.7.DSP.4.a.1:</b> Make or select a statement to compare the distribution of two data sets.		
	<b>MA.7.DSP.5.a.1:</b> Describe the probability of events as being certain or impossible.		
	<b>MA.7.DSP.6.a.1:</b> Make a prediction regarding the probability of an event occurring; conduct simple probability experiments.		
	<b>MA.7.DSP.7.a.1:</b> Compare actual results of simple experiments with theoretical probabilities.		