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SuccessMaker ®

**Missouri Mathematics Learning Standards:
Grade Level Expectations 2016, Grade 8**

Alignments to SuccessMaker
Providing rigorous intervention
for K-8 learners with unparalleled precision

Missouri Learning Standards Code	Missouri Mathematics Learning Standards: Grade Level Expectations, 2016 Grade 8	SuccessMaker Item Description	Item ID
RP	Ratios and Proportional Relationships		
NS	Number Sense and Operations		
NS.A	Know that there are numbers that are not rational, and approximate them by rational numbers.		
NS.A.1	Explore the real number system.		
NS.A.1.c	Convert decimals which repeat into fractions and fractions into repeating decimals.	Complete the equivalence table by expressing a decimal number as a fraction and a percent (round answer to the nearest hundredth).	SMMA_LO_01821
		Complete the equivalence table by expressing a fraction as a decimal number and a percent (round answer to the nearest hundredth).	SMMA_LO_01822
		Complete the equivalence table by expressing a decimal number as a fraction and a percent.	SMMA_LO_01820
NS.A.2	Estimate the value and compare the size of irrational numbers and approximate their locations on a number line.	Drag rational and irrational values to their correct positions on a number line.	SMMA_LO_02141
EEI	Expressions, Equations and Inequalities		
EEI.A	Work with radicals and integer exponents.		
EEI.A.3	Express very large and very small quantities in scientific notation and approximate how many times larger one is than the other.	Write very small numbers in scientific notation.	SMMA_LO_02070
		Compare numbers written in scientific notation.	SMMA_LO_02072
		Express a number in scientific notation (exponents 1 to 6).	SMMA_LO_01113

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		Write very large numbers in scientific notation.	SMMA_LO_02071
EEI.A.4	Use scientific notation to solve problems.		
EEI.A.4.a	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used.	Given the scientific notation, determine the standard notation of a number (the power of 10 has an exponent of 1 to 6).	SMMA_LO_01121
		Find the missing exponent for a number written in scientific notation (the exponent is 1 to 6).	SMMA_LO_01122
EEI.A.4.b	Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities.	Write very small numbers in scientific notation.	SMMA_LO_02070
		Express a number in scientific notation (exponents 1 to 6).	SMMA_LO_01113
		Write very large numbers in scientific notation.	SMMA_LO_02071
EEI.B	Understand the connections between proportional relationships, lines and linear equations.		
EEI.B.1	Graph proportional relationships.		
EEI.B.1.a	Interpret the unit rate as the slope of the graph.	Graph proportional relationships and interpret the unit rate as the slope of the graph.	SMMA_LO_02073

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EEI.B.2	Apply concepts of slope and y-intercept to graphs, equations and proportional relationships.		
EEI.B.2.a	Explain why the slope (m) is the same between any two distinct points on a non-vertical line in the Cartesian coordinate plane.	Use similar triangles to explain why the slope m is the same between any two distinct points on a nonvertical line in the coordinate plane.	SMMA_LO_02075
EEI.B.2.b	Derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.	Derive the equation y = mx for a line through the origin, and y = mx + b for a line intercepting the vertical axis at b.	SMMA_LO_02076
EEI.C	Analyze and solve linear equations and inequalities and pairs of simultaneous linear equations.		
EEI.C.1	Solve linear equations and inequalities in one variable.		
EEI.C.1.b	Solve linear equations and inequalities with rational number coefficients, including equations and inequalities whose solutions require expanding expressions using the distributive property and combining like terms.	Find three consecutive integers when given their sum.	SMMA_LO_01639

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EEI.C.2	Analyze and solve systems of linear equations.		
EEI.C.2.a	Graph systems of linear equations and recognize the intersection as the solution to the system.	Model a real-world problem with a system of linear equations. Then solve it by locating the intersection point of the graphs of the two equations.	SMMA_LO_02134
		Identify the solution to a system of linear equations by locating the point of intersection on its graph.	SMMA_LO_02080
EEI.C.2.b	Explain why solution(s) to a system of two linear equations in two variables correspond to point(s) of intersection of the graphs.	Model a real-world problem with a system of linear equations. Then solve it by locating the intersection point of the graphs of the two equations.	SMMA_LO_02134
		Identify the solution to a system of linear equations by locating the point of intersection on its graph.	SMMA_LO_02080
GM	Geometry and Measurement		
GM.A	Understand congruence and similarity using physical models, transparencies or geometry software.		
GM.A.1	Verify experimentally the congruence properties of rigid transformations.		
GM.A.1.b	Investigate if orientation is preserved under rigid transformations.	Determine the algebraic expression used to find the coordinates of the image of a figure under a dilation with the origin as the center of dilation.	SMMA_LO_02142
GM.A.3	Describe the effect of dilations, translations, rotations and reflections on two-dimensional figures using coordinates.	Determine the algebraic expression used to find the coordinates of the image of a figure under a dilation with the origin as the center of dilation.	SMMA_LO_02142

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GM.A.5	Explore angle relationships and establish informal arguments.		
GM.A.5.c	Construct and explore the angles created when parallel lines are cut by a transversal.	Establish that alternate interior angles are congruent for parallel lines.	SMMA_LO_00672
		In a figure in which parallel lines are cut by a transversal, identify the transformations that would line one angle up with another angle. Then, describe the relationship between the two angles.	SMMA_LO_02129
GM.B	Understand and apply the Pythagorean Theorem.		
GM.B.3	Use the Pythagorean Theorem to find the distance between points in a Cartesian coordinate system.	Given two points on a coordinate grid, draw a right triangle whose hypotenuse connects the two points. Then use the Pythagorean Theorem to find the distance between the two points.	SMMA_LO_02100
GM.C	Solve problems involving volume of cones, pyramids and spheres.		
GM.C.1	Solve problems involving surface area and volume.		
GM.C.1.b	Understand the concepts of volume and find the volume of pyramids, cones and spheres.	Use a formula to find the volume of a cone or a sphere.	SMMA_LO_00844
F	Functions		
F.A	Define, evaluate and compare functions.		
F.A.1	Explore the concept of functions. (The use of function notation is not required.)		
F.A.1.b	Determine if a relation is a function.	Given a set of graphs of relations, identify which graphs represent functions.	SMMA_LO_01835

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		Given a list of ordered pairs of a relation, identify two ordered pairs that show the relation is not a function.	SMMA_LO_01811
		Given a graph of a relation, identify two ordered pairs on the graph that show the relation is not a function.	SMMA_LO_01812
F.A.1.c	Graph a function.	Complete a table of values and graph the equation of a quadratic function.	SMMA_LO_01836
		Complete a table of values and graph the equation of a linear function.	SMMA_LO_01837
F.A.2	Compare characteristics of two functions each represented in a different way.	Identify the rate of change and the y-intercept of two linear functions, one represented in a verbal description, and one represented either graphically or algebraically.	SMMA_LO_02102
F.A.3	Investigate the differences between linear and nonlinear functions.		
F.A.3.a	Interpret the equation y = mx + b as defining a linear function, whose parameters are the slope (m) and the y-intercept (b).	Derive the equation y = mx for a line through the origin, and y = mx + b for a line intercepting the vertical axis at b.	SMMA_LO_02076
F.A.3.c	Give examples of nonlinear functions.	Identify the function that is represented by a table of values (linear and nonlinear).	SMMA_LO_01883
		Identify whether graphs are linear or nonlinear.	SMMA_LO_01832
		Determine if a table values represents a linear or nonlinear function.	SMMA_LO_01834
		Identify if an equation is a linear or nonlinear function.	SMMA_LO_01833