



# SuccessMaker®

**Missouri Mathematics Learning Standards:  
Grade Level Expectations 2016, Grade 7**

## **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 7	SuccessMaker Item Description	Item ID
RP	Ratios and Proportional Relationships		
RP.A	Analyze proportional relationships and use them to solve problems.		
RP.A.2	Recognize and represent proportional relationships between quantities.		
RP.A.2.c	Explain what a point $(x, y)$ on the graph of a proportional relationship means in terms of the situation.	Interpret the meaning of a point on the graph of a proportional relationship in terms of the situation; use this information to answer questions about the situation.	SMMA_LO_02089
RP.A.3	Solve problems involving ratios, rates, percentages and proportional relationships.	Determine the fraction needed to complete the proportion.	SMMA_LO_01827
		Find the amount of an ingredient needed to make two, three or four times a recipe.	SMMA_LO_01627
		Identify the correct proportion for the context, and then solve.	SMMA_LO_01826

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NS	Number Sense and Operations		
NS.A	Apply and extend previous understandings of operations to add, subtract, multiply and divide rational numbers.		
NS.A.1	Apply and extend previous understandings of numbers to add and subtract rational numbers.		
NS.A.1.c	Describe situations and show that a number and its opposite have a sum of 0 (additive inverses).	Describe situations that can be represented by opposite quantities.	SMMA_LO_02086
		Find the sum of four integers when two are additive inverses (a, b, c, and d have absolute values 1 to 20).	SMMA_LO_00119
NS.A.1.d	Understand subtraction of rational numbers as adding the additive inverse.	Evaluate the expression $-(-a)$ , where a has values 1 to 99.	SMMA_LO_01518
		Identify $a - b$ as equivalent to $a + (-b)$ , where a and b are 1 to 20.	SMMA_LO_01514
		Identify $a - (-b)$ as equivalent to $a + b$ (minuends 1 to 10).	SMMA_LO_01517
		Identify $-a - (-b)$ as equivalent to $-a + b$ (minuends and subtrahends -9 to 9).	SMMA_LO_01521
		Identify $-a - b$ as equivalent to $-a + (-b)$ (minuends -20 to -1).	SMMA_LO_01515
NS.A.2	Apply and extend previous understandings of numbers to multiply and divide rational numbers.		
NS.A.2.f	Interpret products and quotients of rational numbers by describing real-world contexts.	Interpret quotients of rational numbers by describing real-world contexts.	SMMA_LO_02088

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EEl	Expressions, Equations and Inequalities		
EEl.A	Use properties of operations to generate equivalent expressions.		
EEl.A.1	Apply properties of operations to simplify and to factor linear algebraic expressions with rational coefficients.	Rewrite an expression from context by factoring and combining like terms.	SMMA_LO_02150
EEl.B	Solve problems using numerical and algebraic expressions and equations.		
EEl.B.2	Write and/or solve linear equations and inequalities in one variable.		
EEl.B.2.a	Write and/or solve equations of the form $x+p = q$ and $px = q$ in which $p$ and $q$ are rational numbers.	Solve for $a$ , $b$ , $c$ , or $d$ in $a/b \times c/d = e/f$ (combinations to $12 \times 12$ ).	SMMA_LO_00372
EEl.B.2.b	Write and/or solve two-step equations of the form $px + q = r$ and $p(x + q) = r$ , where $p$ , $q$ and $r$ are rational numbers, and interpret the meaning of the solution in the context of the problem.	Complete the steps to solve for $x$ in $ax - b = c$ ( $x$ is from $-9$ to $2$ ).	SMMA_LO_00393
		Complete the steps to solve for $x$ in $ax + b = c$ .	SMMA_LO_00383
		Solve for $a$ or $c$ in $a/b + c/b = d/b$ (improper fractions, sums $4/3$ to $35/12$ ).	SMMA_LO_00364
		Solve for $x$ in $ax + b = c$ .	SMMA_LO_00384
		Solve for $a$ or $c$ in $a/b - c/b = d/b$ (improper fractions, minuends $4/3$ to $35/12$ ).	SMMA_LO_00362
		Solve for $a$ or $c$ in $a/b + c/b = d/b$ (sums $2/3$ to $11/12$ ).	SMMA_LO_00356
		Complete the steps to solve for $x$ in $ax + b = c$ ( $x$ is from $-9$ to $-1$ ).	SMMA_LO_00392

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		Complete the steps to solve for $x$ in $ax - b = c$ ( $x$ is from -9 to 9).	SMMA_LO_00394
		Solve for $a$ or $c$ in $(a/b - c/b = d/b)$ (minuends $2/3$ to $11/12$ ).	SMMA_LO_00360
EEL.B.2.c	Write, solve and/or graph inequalities of the form $px + q > r$ or $px + q < r$ , where $p$ , $q$ and $r$ are rational numbers.	Write an inequality of the form $px + q > r$ or $px + q < r$ to represent a constraint in a real-world problem.	SMMA_LO_02083
		Solve an inequality of the form $px + q > r$ or $px + q < r$ ; then graph the solution on a number line.	SMMA_LO_02084
GM	Geometry and Measurement		
GM.A	Draw and describe geometrical figures and describe the relationships between them.		
GM.A.1	Solve problems involving scale drawings of real objects and geometric figures, including computing actual lengths and areas from a scale drawing and reproducing the drawing at a different scale.	Determine distances from scale drawings (inches to miles, cm to km).	SMMA_LO_00815
GM.A.4	Understand concepts of circles.		
GM.A.4.a	Analyze the relationships among the circumference, the radius, the diameter, the area and Pi in a circle.	Determine the most accurate representation of the circumference of a circle.	SMMA_LO_01784
GM.A.4.b	Know and apply the formulas for circumference and area of circles to solve problems.	Measure the radius of a circle, and then determine the area.	SMMA_LO_01783
		Measure the diameter of a circle, and then determine the area.	SMMA_LO_01781

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GM.B	Apply and extend previous understanding of angle measure, area and volume.		
GM.B.1	Use angle properties to write and solve equations for an unknown angle.	Find the measure of the missing angle in a diagram.	SMMA_LO_00674
GM.B.2	Understand the relationship between area, surface area and volume.		
GM.B.2.a	Find the area of triangles, quadrilaterals and other polygons composed of triangles and rectangles.	Find the area of a triangle using a formula.	SMMA_LO_00827
GM.B.2.b	Find the volume and surface area of prisms, pyramids and cylinders.	Find the volume of a rectangular or triangular prism.	SMMA_LO_00838
DSP	Data Analysis, Statistics and Probability		
DSP.C	Develop, use and evaluate probability models.		
DSP.C.1	Investigate the probability of chance events.		
DSP.C.1.a	Determine probabilities of simple events.	Determine the probability of an event.	SMMA_LO_01197
		Given a sentence describing an observed event, label a future occurrence as certain, possible, or impossible.	SMMA_LO_01143
		Given a graphical representation of an urn containing balls of three colors, determine qualitatively which event is more probable to occur.	SMMA_LO_01163
		Given a graphical representation of an urn containing balls of two colors, determine qualitatively which color is more probable to be randomly selected (2 to 4 times as many balls of one color as of the other color).	SMMA_LO_01159

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		Given information about a current situation, classify a future event as being certain, possible, or impossible.	SMMA_LO_01139
		Given a graphical representation of an urn containing balls of three colors, determine qualitatively which event is more probable to occur (5 to 8 times as many balls of one color as of the other color).	SMMA_LO_01157
		In the context of randomly selecting a card that has one of two pictures on it, compute the probability of each picture being selected from a set of cards (total of 4 to 7 cards).	SMMA_LO_01211
		Within the context of selecting without replacement from a cup containing three balls, each of a different color, label a given event prior to each selection as certain, possible, or impossible.	SMMA_LO_01147
		Write a fraction to express the probability of an event.	SMMA_LO_01667
		Given a graphical representation of a bowl containing marbles of two colors, represent on a qualitative ordinal scale the probability of an event and its complement.	SMMA_LO_01171
		Using a graphical representation of an urn and a set of balls of two colors, modify a random experiment so that the qualitative probability of getting one color is greater than that of getting the other color.	SMMA_LO_01161

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		Express an event as a ratio of the number of favorable outcomes to the total number of outcomes (bowl containing marbles of two colors).	SMMA_LO_01179
		Create a set of colored balls whose contents are specified by whether it is certain, possible, or impossible to select a particular color.	SMMA_LO_01153
		Given the graphical representation of a bowl containing marbles of two colors, represent on a qualitative ordinal scale the probability of an event (6 to 11 marbles in the bowl).	SMMA_LO_01165
		Given a graphical representation of a spinner partitioned into sectors of different sizes, each containing one of several possible pictures, label events as certain or impossible or pairs of events as more, less, or equally likely.	SMMA_LO_01212
DSP.C.2	Investigate the relationship between theoretical and experimental probabilities for simple events.		
DSP.C.2.c	Compare theoretical and experimental probabilities.	Determine the event that is most or least likely; then conduct a simulation in which the results are recorded so that theoretical and experimental probability can be compared.	SMMA_LO_01738

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