



SuccessMaker®

Massachusetts Curriculum Framework
for Mathematics 2017, Grade 7

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Providing rigorous intervention
for K-8 learners with unparalleled precision

Massachusetts Curriculum Framework for Mathematics 2017 Grade 7	Item Code	SuccessMaker Item Description
(7.RP) Ratios and Proportional Relationships		
(7.RP.A) Analyze proportional relationships and use them to solve real-world and mathematical problems.		
(7.RP.A.1) Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units.	SMMA_LO_01826	Identify the correct proportion for the context, and then solve.
(7.RP.A.2) Recognize and represent proportional relationships between quantities.		
(7.RP.A.2.a) Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table, or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.	SMMA_LO_00660	Form a proportion that can be used to solve for the height of an object.
	SMMA_LO_01827	Determine the fraction needed to complete the proportion.
(7.RP.A.2.b) Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	SMMA_LO_02001	Identify the unit rate given a table, a graph, an equation, a diagram, or a word problem.
	SMMA_LO_02002	Identify the constant of proportionality given a table, a graph, an equation, a diagram, or a word problem.
(7.RP.A.2.c) Represent proportional relationships by equations.	SMMA_LO_01297	Identify the number sentence that can be used to solve a two-step problem in context.
	SMMA_LO_01336	Given the number of kilowatt-hours used and a price, find the total cost of power.
	SMMA_LO_01339	Convert light years to kilometers and kilometers to light years.
	SMMA_LO_02513	Students find and interpret the constant of proportionality and use it to write an equation. They will then use that equation.

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(7.RP.A.2.d) Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.	SMMA_LO_02089	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.
(7.RP.A.3) Use proportional relationships to solve multi-step ratio, rate, and percent problems.	SMMA_LO_00178	Find the total cost, given an amount and the sales tax percentage.
	SMMA_LO_00278	Find the percent of increase.
	SMMA_LO_00845	Identify a correct expression to solve a problem about sales tax.
	SMMA_LO_01636	Find the number of grams that represents a percentage of the total weight (whole numbers).
	SMMA_LO_01637	Find total earnings for two to four weeks given the weekly salary, commission percentage, and total sales (whole number percents).
	SMMA_LO_01805	Solve for a variable in the formula for simple interest (whole numbers and decimals).
	SMMA_LO_02512	Students calculate and use percent increase.
(7.NS) The Number System		
(7.NS.A) Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.		
(7.NS.A.1) Apply and extend previous understandings of addition and subtraction to add and subtract integers and other rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.		
(7.NS.A.1.a) Describe situations in which opposite quantities combine to make zero.	SMMA_LO_02086	Describe situations that can be represented by opposite quantities.

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(7.NS.A.1.b) Understand $p + q$ as the number located a distance $ q $ from p , in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	SMMA_LO_00102	Find the missing one-digit addend in a number sentence (positive or negative integers, sums are 0).
	SMMA_LO_00107	Add two negative integers or add 0 and a negative integer (sums -20 to 0).
	SMMA_LO_00108	Add a positive and a negative integer (one-digit addends, sums -9 to 9).
	SMMA_LO_00109	Add two integers using addition facts (addends -10 to 10, sums -20 to 20).
	SMMA_LO_00128	Evaluate $-(a + b)$, where $1 < a, b < 9$.
	SMMA_LO_01115	Find a missing number in an arithmetic sequence (-200 to 200, intervals 3 to 8).
	SMMA_LO_02085	Represent addition of integers on a number line.
	SMMA_LO_00106	Determine if the sum is positive or negative (one- and two-digit addends).
(7.NS.A.1.c) Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	SMMA_LO_01505	Subtract integers using a number line (differences -5 to 1).
	SMMA_LO_01506	Subtract integers (minuends 0 to 10, subtrahends 1 to 10, differences negative).
	SMMA_LO_01507	Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).
	SMMA_LO_01508	Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).
	SMMA_LO_01510	Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).

Massachusetts Curriculum Framework for Mathematics 2017 Grade 7	Item Code	SuccessMaker Item Description
	SMMA_LO_01511	Subtract integers using a number line (differences -5 to 4).
	SMMA_LO_01513	Subtract integers (minuends -11 to -20, subtrahends -1 to -10, negative differences).
	SMMA_LO_01514	Identify $a - b$ as equivalent to $a + (-b)$, where a and b are 1 to 20.
	SMMA_LO_01515	Identify $-a - b$ as equivalent to $-a + (-b)$ (minuends -20 to -1).
	SMMA_LO_01516	Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).
	SMMA_LO_01517	Identify $a - (-b)$ as equivalent to $a + b$ (minuends 1 to 10).
	SMMA_LO_01519	Subtract integers (minuend 0, subtrahends 1 to 20).
	SMMA_LO_01520	Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).
	SMMA_LO_01521	Identify $-a - (-b)$ as equivalent to $-a + b$ (minuends and subtrahends -9 to 9).
	SMMA_LO_01522	Subtract integers (minuends -10 to 0, subtrahends -10 to -1).
	SMMA_LO_01525	Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).
	SMMA_LO_01526	Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).
	SMMA_LO_01529	Identify $-(a - b)$ as equivalent to $-a + b$ with variables.
	SMMA_LO_01530	Identify $-(-a - b)$ as equivalent to $a + b$ with variables.
	SMMA_LO_01531	Evaluate the expression $-(a - b)$, where a and b have values from 1 to 9.
	SMMA_LO_01532	Evaluate the expression $-(-a - b)$, where a and b have values from 1 to 9.
	SMMA_LO_02152	Represent subtraction of integers on a number line.
	SMMA_LO_02153	Represent addition and subtraction of rational numbers (fractions) on a number line.

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	SMMA_LO_02154	Represent addition and subtraction of rational numbers (decimals) on a number line.
(7.NS.A.1.d) Apply properties of operations as strategies to add and subtract rational numbers.	SMMA_LO_00114	Identify an equivalent expression of commutativity for addition of integers.
	SMMA_LO_00119	Find the sum of four integers when two are additive inverses (a, b, c, and d have absolute values 1 to 20).
	SMMA_LO_00120	Compare two expressions using the additive inverse property.
	SMMA_LO_00117	Identify an equivalent expression with integers (four one-digit addends).
(7.NS.A.2) Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide integers and other rational numbers.		
(7.NS.A.2.a) Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.	SMMA_LO_00124	Identify an equivalent variable expression $-(a + b) = -a + (-b)$.
	SMMA_LO_00130	Identify $a \times (b - c)$ as equivalent to $(a \times b) - (a \times c)$.
	SMMA_LO_00914	Multiply a negative integer by a positive integer (products -144 to -4).
	SMMA_LO_00915	Multiply two negative integers (products 4 to 144).
	SMMA_LO_00916	Determine the sign of the products of two integers (one and two-digit integers).
	SMMA_LO_00917	Multiply a negative integer by a positive integer (one-digit number \times two-digit multiple of 10).
	SMMA_LO_00919	Determine the sign of the product of four factors.

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(7.NS.A.2.b) Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.	SMMA_LO_00316	Divide integers (combinations 6 x 10 to -9 x 12, dividend or divisor is negative).
	SMMA_LO_00317	Divide integers (combinations 4 x 6 to 12 x 12).
	SMMA_LO_00319	Divide integers (combinations 6 x 13 to 9 x 19, all signs).
	SMMA_LO_02087	Identify fractions that are equivalent to a given negative fraction.
	SMMA_LO_02088	Interpret quotients of rational numbers by describing real-world contexts.
(7.NS.A.2.c) Apply properties of operations as strategies to multiply and divide rational numbers.	SMMA_LO_00118	Identify $-(a + b)$ as equivalent to $-a - b$, where a and b are 1 to 9.
	SMMA_LO_01523	Identify $-(a - b)$ as equivalent to $-a + b$ (a and b from 1 to 9).
	SMMA_LO_01524	Identify $-(-a - b)$ as equivalent to $a + b$ (a and b from 1 to 9).
	SMMA_LO_01533	Identify $a \times (b - c)$ as equivalent to $(a \times b) - (a \times c)$ with variables.
	SMMA_LO_01534	Identify $a \times (b - c)$ as equivalent to $(a \times b) - (a \times c)$.
(7.NS.A.2.d) Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	SMMA_LO_00258	Divide to convert from a fraction to a decimal equivalent.
	SMMA_LO_00260	Determine the equivalent decimal for a mixed number.
	SMMA_LO_00257	Identify the division problem that can be used to rewrite a fraction as a decimal.

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(7.NS.A.3) Solve real-world and mathematical problems involving the four operations with integers and other rational numbers.	SMMA_LO_00103	Find the missing two-digit addend in a number sentence (sums are 0).
	SMMA_LO_00104	Find the missing two-digit addend in a number sentence (sums are 0, missing addend is first).
	SMMA_LO_00105	Find the missing negative addend in a number sentence (sums 1 to 8).
	SMMA_LO_00110	Find the missing addend in a number sentence (missing addends -10 to 10, sums -20 to 20).
	SMMA_LO_00111	Add three integers (sum -10 to 10).
	SMMA_LO_00113	Add integers in an associative expression $((a + b) + c)$, three addends -10 to 10).
	SMMA_LO_00115	Identify $-(a + b)$ as equivalent to $-a + (-b)$, where a and b are 1 to 9.
	SMMA_LO_00116	Identify $-(a + b)$ as equivalent to $-a - b$, where a and b are 1 to 9.
	SMMA_LO_00121	Add two integers (-20 to 20).
	SMMA_LO_00122	Find the missing addend in a number sentence (sums -20 to 20).
	SMMA_LO_00123	Find the missing addend in a number sentence (three addends, -10 to 10).
	SMMA_LO_00309	Find the missing dividend or divisor (combinations 2×13 to 5×19).
	SMMA_LO_00310	Finding the missing dividend or divisor (combinations 6×13 to 9×19).
	SMMA_LO_00320	Find the missing dividend or divisor in a number sentence (combinations 7×13 to 9×19 , all signs).
	SMMA_LO_00918	Find the missing positive or negative factor in a number sentence.
	SMMA_LO_00920	Multiply three integers (one-digit factors with absolute values 2 to 10).
	SMMA_LO_01117	Find a missing number in a geometric sequence (first number 1 to 5, factors 2 to 5).
	SMMA_LO_01509	Find the missing subtrahend in a number sentence (minuends 0 to 10, subtrahends 2 to 11, negative differences).

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	SMMA_LO_01512	Find the missing subtrahend in a number sentence (minuends -9 to 0, differences -9 to 0).
	SMMA_LO_01527	Evaluate a numerical expression $(a) + (b) - (c)$, where a, b, and c have values from -9 to 9.
	SMMA_LO_01528	Compare sums and difference of positive and negative integers (-5 to 5).
	SMMA_LO_01631	Solve a two-step addition problem to find a person's age in 5 to 20 years from now.
	SMMA_LO_01632	Find the final temperature given the initial temperature and the temperature increase.
	SMMA_LO_01639	Find three consecutive integers when given their sum.
	SMMA_LO_01803	Extend an arithmetic sequence for three more terms.
	SMMA_LO_01818	Evaluate an algebraic expression with exponents (integers -10 to 10).
	SMMA_LO_01842	Evaluate an algebraic expression (integers -10 to 10).
	SMMA_LO_01843	Evaluate an algebraic expression with three variables (-5.9 to 5.9).
	SMMA_LO_00375	Solve for a, b, or c in $a/b \div c = d/e$ (combinations to $12 \div 12$).
	SMMA_LO_00377	Solve for a, b, c, or d in $a/b \div c/d = e/f$.
(7.EE) Expressions and Equations		
(7.EE.A) Use properties of operations to generate equivalent expressions.		
(7.EE.A.1) Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients.	SMMA_LO_02149	Apply properties of operations to add two linear expressions.
(7.EE.A.2) Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.	SMMA_LO_02150	Rewrite an expression from context by factoring and combining like terms.
(7.EE.B) Solve real-life and mathematical problems using numerical and algebraic expressions and equations.		

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(7.EE.B.3) Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	SMMA_LO_00372	Solve for a, b, c, or d in $a/b \times c/d = e/f$ (combinations to 12 x 12).
	SMMA_LO_00255	Find an equivalent mixed number for a decimal (tenths to ten thousandths).
	SMMA_LO_00256	Determine the decimal and percent that is represented by a model (base-ten blocks, hundredths).
(7.EE.B.4) Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	SMMA_LO_02140	Match equations and inequalities with real-world situations.
(7.EE.B.4.a) Solve word problems leading to equations of the form $px + q = r$ and $p(x \div q) = r$, where p , q , and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.	SMMA_LO_00360	Solve for a or c in $(a/b - c/b = d/b)$ (minuends 2/3 to 11/12).
	SMMA_LO_00362	Solve for a or c in $a/b - c/b = d/b$ (improper fractions, minuends 4/3 to 35/12).
	SMMA_LO_00364	Solve for a or c in $a/b + c/b = d/b$ (improper fractions, sums 4/3 to 35/12).
	SMMA_LO_00382	Solve for a in $ba/c = d$ by multiplying by the reciprocal.
	SMMA_LO_00383	Complete the steps to solve for x in $ax + b = c$.
	SMMA_LO_00384	Solve for x in $ax + b = c$.
	SMMA_LO_00385	Identify the equation that translates the written phrase ($ax + b = c$).

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	SMMA_LO_00386	Identify the equation that translates the written phrase ($ax + b = c$).
	SMMA_LO_00388	Solve for a in $a + b = c$ (a is from -20 to -1).
	SMMA_LO_00389	Solve for a in $a - b = c$ (differences from -19 to 11).
	SMMA_LO_00390	Solve for x in $ax = b$ (products from $-(4 \times 4)$ to $-(9 \times 9)$).
	SMMA_LO_00391	Solve for a in $a/b = c$ (products from $-(4 \times 4)$ to $-(9 \times 9)$).
	SMMA_LO_00392	Complete the steps to solve for x in $ax + b = c$ (x is from -9 to -1).
	SMMA_LO_00393	Complete the steps to solve for x in $ax - b = c$ (x is from -9 to 2).
	SMMA_LO_00394	Complete the steps to solve for x in $ax - b = c$ (x is from -9 to 9).
	SMMA_LO_00395	Solve for x in $-x = a$ (numbers from -99 to 99).
	SMMA_LO_00396	Complete the steps to solve for x in $a - x = b$.
	SMMA_LO_00397	Determine whether a given value for x is a solution for $ax + b = c$ (x is from -9 to 9).
	SMMA_LO_01638	Solve for a two-step equation in context.
	SMMA_LO_01800	Solve a one-step equation (multiplication and division, integers).
	SMMA_LO_01801	Solve a one-step equation (addition and subtraction, one-digit integers).
	SMMA_LO_01844	Solve a one-step equation (two-digit integers, addition and subtraction).
	SMMA_LO_01845	Solve a one-step equation (integers, multiplication and division).
	SMMA_LO_01846	Solve a two-step equation (integers).
	SMMA_LO_01848	Solve a one-step equation (fractions, addition and subtraction).
	SMMA_LO_01849	Solve a one-step equation (decimal integers, multiplication and division).
	SMMA_LO_01850	Solve a two-step equation (fractions, multiplication).
	SMMA_LO_01851	Solve a two-step equation (decimals).

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	SMMA_LO_01814	Identify the two-step equation that is a translation of the written phrase within a context.
	SMMA_LO_01852	Identify the equation translated from a written phrase.
(7.EE.B.4.b) Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.	SMMA_LO_02083	Write an inequality of the form $px + q > r$ or $px + q < r$ to represent a constraint in a real-world problem.
	SMMA_LO_02084	Solve an inequality of the form $px + q > r$ or $px + q < r$; then graph the solution on a number line.
	SMMA_LO_01853	Identify the inequality translated from a written phrase.
	SMMA_LO_01869	Identify the written phrase translated from an inequality.
	SMMA_LO_01870	Identify the written phrase translated from an inequality.
(7.G) Geometry		
(7.G.A) Draw, construct, and describe geometrical figures and describe the relationships between them.		
(7.G.A.1) Solve problems involving scale drawings of geometric figures, such as computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	SMMA_LO_00513	Identify the scale factor in similar shapes to find the missing corresponding sides.
	SMMA_LO_00815	Determine distances from scale drawings (inches to miles, cm to km).
	SMMA_LO_00846	Interpret scale drawings (metric and customary units of length).
(7.G.A.3) Describe the shape of the two-dimensional face of the figure that results from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	SMMA_LO_00668	Identify the cross section of a three-dimensional figure.

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(7.G.B) Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.		
(7.G.B.4) Circles and measurement:	SMMA_LO_00828	Find the circumference, given the length of the diameter or the radius ($\pi = 3.14$).
	SMMA_LO_01779	Measure the diameter of a circle, and then determine the circumference.
	SMMA_LO_01780	Measure the radius of a circle, and then determine the circumference.
	SMMA_LO_01781	Measure the diameter of a circle, and then determine the area.
	SMMA_LO_01783	Measure the radius of a circle, and then determine the area.
	SMMA_LO_01784	Determine the most accurate representation of the circumference of a circle.
	SMMA_LO_01855	Given the radius, find the circumference of a circle within context.
	SMMA_LO_01856	Given the diameter, find the circumference of a circle within context.
	SMMA_LO_00633	Identify parts of a circle (center, radius, and diameter).
	SMMA_LO_00653	Identify a part of a circle (center, radius, chord, or diameter).
(7.G.B.5) Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write simple equations and use them to solve for an unknown angle in a figure.	SMMA_LO_00670	Establish that vertical angles are congruent.
	SMMA_LO_00674	Find the measure of the missing angle in a diagram.
	SMMA_LO_00677	Solve a problem involving equal angle measures.

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(7.G.B.6) Solve real-world and mathematical problems involving area, volume, and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	SMMA_LO_00176	Find the area of a triangle (2 to 72 square inches).
	SMMA_LO_00824	Use a formula to find the area of a parallelogram.
	SMMA_LO_00827	Find the area of a triangle using a formula.
	SMMA_LO_00838	Find the volume of a rectangular or triangular prism.
	SMMA_LO_00848	Choose the best estimate for the volume of a rectangular prism.
	SMMA_LO_01817	Solve for a variable in the formula for volume of a rectangular prism (whole numbers and mixed numbers).
	SMMA_LO_01819	Calculate the volume of a rectangular prism; then convert the cubic feet or cubic meters into gallons or liters.
	SMMA_LO_02514	Students apply the 4 operations to rational numbers.

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(7.SP) Statistics and Probability		
(7.SP.A) Use random sampling to draw inferences about a population.		
(7.SP.A.2) Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.	SMMA_LO_01223	Make predictions based on a sample.
(7.SP.B) Draw informal comparative inferences about two populations.		
(7.SP.B.4) Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.	SMMA_LO_01221	Find and compare the average variation of two sets of data.
(7.SP.C) Investigate chance processes and develop, use, and evaluate probability models.		
(7.SP.C.5) Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around $\frac{1}{2}$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	SMMA_LO_01137	Determine whether a chronological event is certain or impossible.
	SMMA_LO_01139	Given information about a current situation, classify a future event as being certain, possible, or impossible.
	SMMA_LO_01143	Given a sentence describing an observed event, label a future occurrence as certain, possible, or impossible.
	SMMA_LO_01147	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.

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	SMMA_LO_01153	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_01157	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_01159	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_01161	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_01163	Given a graphical representation of an urn containing balls of three colors, determine qualitatively which event is more probable to occur.
	SMMA_LO_01165	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_01171	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_01173	Given a graphical representation of two urns containing different compositions of balls of two colors, select the urn in which an event is qualitatively determined to have a high probability.

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	SMMA_LO_01179	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_01197	Determine the probability of an event.
	SMMA_LO_01200	Within the context of selecting without replacement from a bowl containing marbles of two colors, indicate the effect of changes on the probability of the event in both the number of possible outcomes favorable to an event and the total number of possible
	SMMA_LO_01203	Within the context of selecting without replacement from a bowl containing marbles of two colors, indicate the effect of changes on the probability of the event in both the number of possible outcomes favorable to an event and the total number of possible
	SMMA_LO_01212	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_01216	Within the context of selecting without replacement from a bowl containing marbles of two colors, indicate the effect of changes on the probability of the event in both the number of possible outcomes favorable to an event and the total number of possible
	SMMA_LO_01220	Within the context of selecting without replacement from a bowl containing marbles of two colors, indicate the effect of changes on the probability of the event in both the number of possible outcomes favorable to an event and the total number of possible

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	SMMA_LO_01226	Within the context of selecting without replacement from a bowl containing marbles of two colors, indicate the effect of changes on the probability of the event in both the number of possible outcomes favorable to an event and the total number of possible
	SMMA_LO_01667	Write a fraction to express the probability of an event.
(7.SP.C.6) Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.	SMMA_LO_01738	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.
(7.SP.C.7) Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.		
(7.SP.C.7.a) Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.	SMMA_LO_01211	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_01215	In the context of randomly selecting a card that has a certain me on it, compute the probability of each me being selected from a set of cards.

Massachusetts Curriculum Framework for Mathematics 2017 Grade 7	Item Code	SuccessMaker Item Description
(7.SP.C.8) Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	SMMA_LO_01665	Given a graphical representation of two spinners, count all the possible outcomes for spinning each spinner once.
	SMMA_LO_01717	Determine the number of arrangements that can be made from two groups with two items.
	SMMA_LO_01718	Determine the arrangements that can be made with a group of two and a group of three items.
(7.SP.C.8.a) Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.	SMMA_LO_01224	Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.
	SMMA_LO_01209	Given a graphical representation of a spinner, count the number of possible outcomes and complete a list of all the outcomes.
(7.SP.C.8.b) Represent sample spaces for compound events using methods such as organized lists, tables, and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.	SMMA_LO_01218	Given a coordinate grid to represent outcomes of tossing a pair of number cubes, identify the point that represents a given pair of outcomes.
	SMMA_LO_01219	Given a coordinate grid to represent outcomes of tossing a pair of number cubes, identify all points that represent the sum given for a pair of outcomes.