



SuccessMaker®

Alignments to SuccessMaker

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for K-8 learners with unparalleled precision

Tennessee Mathematics Standards Code	Tennessee Mathematics Standards 2016, Grade 7	SuccessMaker Item Description	Item ID
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.	Convert light years to kilometers and kilometers to light years.	SMMA_LO_01339
		Find the total money earned, given the number of hours worked and the hourly rate.	SMMA_LO_01630
		Find the unit price of an item (products 2×6 to 25×32).	SMMA_LO_00830
		Given the number of kilowatt-hours used and a price, find the total cost of power.	SMMA_LO_01336
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).	Determine the fraction needed to complete the proportion.	SMMA_LO_01827
7.RP.A.2.b	Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	Identify the constant of proportionality given a table, a graph, an equation, a diagram, or a word problem.	SMMA_LO_02002
		Identify the unit rate given a table, a graph, an equation, a diagram, or a word problem.	SMMA_LO_02001
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.	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
7.RP.A.3	Use proportional relationships to solve multi-step ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	Solve for a variable in the formula for simple interest (whole numbers and decimals).	SMMA_LO_01805
		Identify the correct proportion for the context, and then solve.	SMMA_LO_01826
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 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 0.	Describe situations that can be represented by opposite quantities.	SMMA_LO_02086
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.	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
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.	Identify $-a - (-b)$ as equivalent to $-a + b$ (minuends and subtrahends -9 to 9).	SMMA_LO_01521

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		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
		Evaluate the expression $-(-a)$, where a has values 1 to 99.	SMMA_LO_01518
		Identify $-a - b$ as equivalent to $-a + (-b)$ (minuends -20 to -1).	SMMA_LO_01515
7.NS.A.1.d	Apply properties of operations as strategies to add and subtract rational numbers.	Apply properties of operations to add two linear expressions.	SMMA_LO_02149
		Add integers in an associative expression $((a + b) + c, \text{ three addends } -10 \text{ to } 10)$.	SMMA_LO_00113
		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
		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_01510
		Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).	SMMA_LO_01516
		Add two integers (-20 to 20).	SMMA_LO_00121
		Subtract integers (minuend 0, subtrahends 1 to 20).	SMMA_LO_01519
		Subtract integers (minuends -10 to 0, subtrahends -10 to -1).	SMMA_LO_01522
		Add two integers using addition facts (addends -10 to 10, sums -20 to 20).	SMMA_LO_00109
		Subtract integers (minuends 0 to 10, subtrahends 1 to 10, differences negative).	SMMA_LO_01506
		Subtract integers using a number line (differences -5 to 4).	SMMA_LO_01511
		Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).	SMMA_LO_01507
		Subtract integers (minuends -11 to -20, subtrahends -1 to -10, negative differences).	SMMA_LO_01513
		Add a positive and a negative integer (one-digit addends, sums -9 to 9).	SMMA_LO_00108
		Represent subtraction of integers on a number line.	SMMA_LO_02152
		Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).	SMMA_LO_01525
		Add two negative integers or add 0 and a negative integer (sums -20 to 0).	SMMA_LO_00107
		Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).	SMMA_LO_01520
		Identify an equivalent expression with integers (four one-digit addends).	SMMA_LO_00117
		Evaluate an algebraic expression (integers -10 to 10).	SMMA_LO_01842
		Add three integers (sum -10 to 10).	SMMA_LO_00111
		Subtract integers using a number line (differences -5 to 1).	SMMA_LO_01505
		Represent addition of integers on a number line.	SMMA_LO_02085
		Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).	SMMA_LO_01508
		Determine if the sum is positive or negative (one- and two-digit addends).	SMMA_LO_00106
7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.		

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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.	Interpret quotients of rational numbers by describing real-world contexts.	SMMA_LO_02088
7.NS.A.2.c	Apply properties of operations as strategies to multiply and divide rational numbers.	Apply properties of operations to add two linear expressions.	SMMA_LO_02149
		Multiply a negative integer by a positive integer (one-digit number x two-digit multiple of 10).	SMMA_LO_00917
		Determine the sign of the products of two integers (one and two-digit integers).	SMMA_LO_00916
		Determine the sign of the product of four factors.	SMMA_LO_00919
		Solve for x in $ax = b$ (products from $-(4 \times 4)$ to $-(9 \times 9)$).	SMMA_LO_00390
		Multiply a negative integer by a positive integer (products -144 to -4).	SMMA_LO_00914
		Evaluate an algebraic expression (integers -10 to 10).	SMMA_LO_01842
		Multiply two negative integers (products 4 to 144).	SMMA_LO_00915
7.EE	Expressions and Equations		
7.EE.A	Use properties of operations to generate equivalent expressions.		
7.EE.A.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	Apply properties of operations to add two linear expressions.	SMMA_LO_02149
		Evaluate $-(-a + b)$, where $1 < a, b < 9$.	SMMA_LO_00128
		Rewrite an expression from context by factoring and combining like terms.	SMMA_LO_02150
		Evaluate the expression $-(a - b)$, where a and b have values from 1 to 9.	SMMA_LO_01531
		Evaluate a numerical expression $(a) + (b) - (c)$, where $a, b,$ and c have values from -9 to 9.	SMMA_LO_01527
		Evaluate the expression $-(-a - b)$, where a and b have values from 1 to 9.	SMMA_LO_01532
		Evaluate the expression $-(-a)$, where a has values 1 to 99.	SMMA_LO_01518
7.EE.B	Solve real-life and mathematical problems using numerical and algebraic expressions and equations and inequalities.		
7.EE.B.3	Solve multi-step real-world and mathematical problems posed with positive and negative rational numbers presented in any form (whole numbers, fractions, and decimals).	Find the missing two-digit addend in a number sentence (sums are 0, missing addend is first).	SMMA_LO_00104
		Find the missing negative addend in a number sentence (sums 1 to 8).	SMMA_LO_00105
		Find the missing one-digit addend in a number sentence (positive or negative integers, sums are 0).	SMMA_LO_00102
		Find the missing subtrahend in a number sentence (minuends -9 to 0, differences -9 to 0).	SMMA_LO_01512
		Find the missing two-digit addend in a number sentence (sums are 0).	SMMA_LO_00103
		Find the missing subtrahend in a number sentence (minuends 0 to 10, subtrahends 2 to 11, negative differences).	SMMA_LO_01509
		Find the missing addend in a number sentence (sums -20 to 20).	SMMA_LO_00122

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		Find the missing addend in a number sentence (three addends, -10 to 10).	SMMA_LO_00123
		Find the missing addend in a number sentence (missing addends -10 to 10, sums -20 to 20).	SMMA_LO_00110
7.EE.B.3.a	Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate.	Apply properties of operations to add two linear expressions.	SMMA_LO_02149
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.		
7.EE.B.4.a	Solve contextual problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, 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.	Complete the steps to solve for x in $a - x = b$.	SMMA_LO_00396
		Complete the steps to solve for x in $ax + b = c$ (x is from -9 to -1).	SMMA_LO_00392
		Solve a one-step equation (fractions, addition and subtraction).	SMMA_LO_01848
		Solve a one-step equation (multiplication, decimals).	SMMA_LO_01797
		Solve a one-step equation with decimals in context (addition and subtraction).	SMMA_LO_01799
		Solve a two-step equation (decimals).	SMMA_LO_01851
		Solve for a in $a + b = c$ (a is from -20 to -1).	SMMA_LO_00388
		Solve for x in $-x = a$ (numbers from -99 to 99).	SMMA_LO_00395
		Solve for a or c in $a/b + c/b = d/b$ (sums $2/3$ to $11/12$).	SMMA_LO_00356
		Solve a one-step equation (integers, multiplication and division).	SMMA_LO_01845
		Solve for a or c in $a/b + c/b = d/b$ (improper fractions, sums $4/3$ to $35/12$).	SMMA_LO_00364
		Complete the steps to solve for x in $ax + b = c$.	SMMA_LO_00383
		Solve a one-step equation (decimal integers, multiplication and division).	SMMA_LO_01849
		Complete the steps to solve for x in $ax - b = c$ (x is from -9 to 2).	SMMA_LO_00393
		Solve a one-step equation (fractions, addition and subtraction).	SMMA_LO_01868
		Solve for a or b in $a + b = c$ (decimals to hundredths).	SMMA_LO_00373
		Solve for a in $ba/c = d$ by multiplying by the reciprocal.	SMMA_LO_01795
		Solve for a in $ba/c = d$ by multiplying by the reciprocal.	SMMA_LO_00382
		Solve for x in $ax = b$ (products from $-(4 \times 4)$ to $-(9 \times 9)$).	SMMA_LO_00390
		Solve a one-step equation (multiplication and division, integers).	SMMA_LO_01800
		Solve for a in $a - b = c$ (differences from -19 to 11).	SMMA_LO_00389
		Solve for a or b in $a - b = c$ (decimals to hundredths, regrouping).	SMMA_LO_00374
		Solve a one-step equation (two-digit integers, addition and subtraction).	SMMA_LO_01844
		Complete the steps to solve for x in $ax - b = c$ (x is from -9 to 9).	SMMA_LO_00394

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		Solve for a in $a/b = c$ (products from $-(4 \times 4)$ to $-(9 \times 9)$).	SMMA_LO_00391
		Solve a one-step equation (addition and subtraction, one-digit integers).	SMMA_LO_01801
		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 x in $ax + b = c$.	SMMA_LO_00384
		Solve for a or c in $(a/b - c/b = d/b)$ (minuends $2/3$ to $11/12$).	SMMA_LO_00360
7.EE.B.4.b	Solve contextual 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 on a number line and interpret it in the context of the problem.	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
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, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Determine distances from scale drawings (inches to miles, cm to km).	SMMA_LO_00815
7.G.B	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.		
7.G.B.3	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Measure the diameter of a circle, and then determine the area.	SMMA_LO_01781
		Measure the radius of a circle, and then determine the area.	SMMA_LO_01783
7.G.B.4	Know and use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	Find the measure of the missing angle in a diagram.	SMMA_LO_00674
		Measure complementary or supplementary angles and find the sum of the angle measures.	SMMA_LO_00661
7.G.B.5	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.	Use a formula to find the surface area of a cylinder or sphere.	SMMA_LO_00840
7	Statistics and Probability (SP)		
7.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 $1/2$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	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

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		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
		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
		Given a sentence describing an observed event, label a future occurrence as certain, possible, or impossible.	SMMA_LO_01143
		Given information about a current situation, classify a future event as being certain, possible, or impossible.	SMMA_LO_01139
7.D	Summarize and describe numerical data sets.		
7.SP.D.8	Summarize numerical data sets in relation to their context.		
7.SP.D.8.a	Give quantitative measures of center (median and/or mean) and variability (range and/or interquartile range), as well as describe any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	Determine the average (mean) of a data set of three to five customary weights or metric masses.	SMMA_LO_00836