



SuccessMaker®

**Alabama Mathematics Course of Study 2019
Grade 7**

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

Alabama Mathematics Standards Code	Alabama Mathematics Course of Study 2019 Grade 7	SuccessMaker Item Description	Item ID
PR	Proportional Reasoning		
	Analyze proportional relationships and use them to solve real-world and mathematical problems.		
PR.1	Calculate unit rates of length, area, and other quantities measured in like or different units that include ratios or fractions.	Students use calculations on rational numbers to figure out the speed at which James Cameron descended into Mariana Trench.	SMMA_LO_02514
PR.2	Represent a relationship between two quantities and determine whether the two quantities are related proportionally.	Graph proportional relationships and interpret the unit rate as the slope of the graph.	SMMA_LO_02073
		Students use proportions to calculate their weight on Mars.	SMMA_LO_02513
		Determine the fraction needed to complete the proportion.	SMMA_LO_01827
		Ratios and Equations Targeted Lesson 14: Graphing Proportional Relationships	
		Students write, graph, and compare two linear functions in order to find the best price for football jerseys.	SMMA_LO_02516
		Ratios and Equations Targeted Lesson 13: Identifying Proportional Relationships	
PR.2.a	Use equivalent ratios displayed in a table or in a graph of the relationship in the coordinate plane to determine whether a relationship between two quantities is proportional.	Determine the fraction needed to complete the proportion.	SMMA_LO_01827
PR.2.b	Identify the constant of proportionality (unit rate) and express the proportional relationship using multiple representations including tables, graphs, equations, diagrams, and verbal descriptions.	Identify two unit rates for a given word problem.	SMMA_LO_02114
		Ratios and Equations Targeted Lesson 12: Rates, Formulas, and Graphs	
		Identify the unit rate given a table, a graph, an equation, a diagram, or a word problem.	SMMA_LO_02001

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		Identify the constant of proportionality given a table, a graph, an equation, a diagram, or a word problem.	SMMA_LO_02002
		Ratios and Equations Targeted Lesson 14: Graphing Proportional Relationships	
PR.2.c	Explain in context the meaning of a point (x, y) on the graph of a proportional relationship, 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
PR.3	Solve multi-step percent problems in context using proportional reasoning, including simple interest, tax, gratuities, commissions, fees, markups and markdowns, percent increase, and percent decrease.	Ratios and Equations Targeted Lesson 18: Solving Percent Problems	
		Find a percent of a money amount (\$0.80 to \$10.80).	SMMA_LO_00270
		Ratios and Equations Targeted Lesson 17: What Does the Percent Refer To?	
		Find the total cost, given an amount and the sales tax percentage.	SMMA_LO_00178
		Find total earnings for two to four weeks given the weekly salary, commission percentage, and total sales (whole number percents).	SMMA_LO_01637
		Identify a correct expression to solve a problem about sales tax.	SMMA_LO_00845
		Students use percents to interpret increase in number of views on a video.	SMMA_LO_02512
		Find the percent of increase.	SMMA_LO_00278

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NO	Number Systems and Operations		
	Apply and extend prior knowledge of addition, subtraction, multiplication, and division to operations with rational numbers.		
NO.4	Apply and extend knowledge of operations of whole numbers, fractions, and decimals to add, subtract, multiply, and divide rational numbers including integers, signed fractions, and decimals.	Represent addition and subtraction of rational numbers (fractions) on a number line.	SMMA_LO_02153
		Find the missing negative addend in a number sentence (sums 1 to 8).	SMMA_LO_00105
		Identify $-a - b$ as equivalent to $-a + (-b)$ (minuends -20 to -1).	SMMA_LO_01515
		Find the missing addend in a number sentence (missing addends -10 to 10, sums -20 to 20).	SMMA_LO_00110
		Identify $-a - (-b)$ as equivalent to $-a + b$ (minuends and subtrahends -9 to 9).	SMMA_LO_01521
		Find the missing addend in a number sentence (sums -20 to 20).	SMMA_LO_00122
		Evaluate the expression $-(-a - b)$, where a and b have values from 1 to 9.	SMMA_LO_01532
		Ratios and Equations Targeted Lesson 7: Subtracting Positive and Negative Numbers	
		Find the missing subtrahend in a number sentence (minuends 0 to 10, subtrahends 2 to 11, negative differences).	SMMA_LO_01509
		Evaluate $-(-a + b)$, where $1 < a$, $b < 9$.	SMMA_LO_00128
		Solve for a in $ba/c = d$ by multiplying by the reciprocal.	SMMA_LO_01795
		Compare two expressions using the additive inverse property.	SMMA_LO_00120
		Ratios and Equations Targeted Lesson 8: Relating Addition and Subtraction of Positive and Negative Numbers	

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		Evaluate the expression $-(a - b)$, where a and b have values from 1 to 9.	SMMA_LO_01531
		Identify $a - b$ as equivalent to $a + (-b)$, where a and b are 1 to 20.	SMMA_LO_01514
		Find the missing two-digit addend in a number sentence (sums are 0, missing addend is first).	SMMA_LO_00104
		Ratios and Equations Targeted Lesson 10: Determining the Sign	
		Solve for a in $ba/c = d$ by multiplying by the reciprocal.	SMMA_LO_00382
		Find the missing addend in a number sentence (three addends, -10 to 10).	SMMA_LO_00123
		Ratios and Equations Targeted Lesson 9: Multiplying and Dividing Positive and Negative Numbers	
		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 -9 to 0, differences -9 to 0).	SMMA_LO_01512
		Find the missing positive or negative factor in a number sentence.	SMMA_LO_00918
		Identify $a - (-b)$ as equivalent to $a + b$ (minuends 1 to 10).	SMMA_LO_01517
		Ratios and Equations Targeted Lesson 6: Adding Positive and Negative Numbers	
NO.4.a	Identify and explain situations where the sum of opposite quantities is 0 and opposite quantities are defined as additive inverses.	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
		Identify $-a - b$ as equivalent to $-a + (-b)$ (minuends -20 to -1).	SMMA_LO_01515
		Identify $-a - (-b)$ as equivalent to $-a + b$ (minuends and subtrahends -9 to 9).	SMMA_LO_01521
		Ratios and Equations Targeted Lesson 7: Subtracting Positive and Negative Numbers	

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		Ratios and Equations Targeted Lesson 3: Negative Numbers and Number Lines	
		Compare two expressions using the additive inverse property.	SMMA_LO_00120
		Ratios and Equations Targeted Lesson 8: Relating Addition and Subtraction of Positive and Negative Numbers	
		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
NO.4.b	Interpret the sum of two or more rational numbers, by using a number line and in real-world contexts.	Addition and Subtraction Targeted Lesson 2: Doubles and Near-Doubles	
		Ratios and Equations Targeted Lesson 6: Adding Positive and Negative Numbers	
NO.4.c	Explain subtraction of rational numbers as addition of additive inverses.	Identify $-a - b$ as equivalent to $-a + (-b)$ (minuends -20 to -1).	SMMA_LO_01515
		Identify $-a - (-b)$ as equivalent to $-a + b$ (minuends and subtrahends -9 to 9).	SMMA_LO_01521
		Ratios and Equations Targeted Lesson 7: Subtracting Positive and Negative Numbers	
		Compare two expressions using the additive inverse property.	SMMA_LO_00120
		Ratios and Equations Targeted Lesson 8: Relating Addition and Subtraction of Positive and Negative Numbers	
		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

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NO.4.d	Use a number line to demonstrate 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.	Ratios and Equations Targeted Lesson 5: Absolute Value	
		Identify absolute value as a distance from zero on a number line.	SMMA_LO_01823
NO.4.e	Extend strategies of multiplication to rational numbers to develop rules for multiplying signed numbers, showing that the properties of the operations are preserved.	Evaluate an algebraic expression (integers -10 to 10).	SMMA_LO_01842
		Determine the sign of the product of four factors.	SMMA_LO_00919
		Multiply a negative integer by a positive integer (one-digit number x two-digit multiple of 10).	SMMA_LO_00917
		Multiply a negative integer by a positive integer (products -144 to -4).	SMMA_LO_00914
		Multiply two negative integers (products 4 to 144).	SMMA_LO_00915
		Apply properties of operations to add two linear expressions.	SMMA_LO_02149
		Ratios and Equations Targeted Lesson 9: Multiplying and Dividing Positive and Negative Numbers	
		Determine the sign of the products of two integers (one and two-digit integers).	SMMA_LO_00916
		Multiply three integers (one-digit factors with absolute values 2 to 10).	SMMA_LO_00920
NO.5	Solve real-world and mathematical problems involving the four operations of rational numbers, including complex fractions. Apply properties of operations as strategies where applicable.	Find three consecutive integers when given their sum.	SMMA_LO_01639
		Students use calculations on rational numbers to figure out the speed at which James Cameron descended into Mariana Trench.	SMMA_LO_02514

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AF	Algebra and Functions		
	Create equivalent expressions using the properties of operations.		
AF.7	Generate expressions in equivalent forms based on context and explain how the quantities are related.	Ratios and Equations Targeted Lesson 19: Parentheses and Order of Operations	
		Apply the properties of operations to generate equivalent expressions.	SMMA_LO_02059
		Identify a number not equivalent to four others.	SMMA_LO_01116
	Solve real-world and mathematical problems using numerical and algebraic expressions, equations, and inequalities.		
AF.8	Solve multi-step real-world and mathematical problems involving rational numbers (integers, signed fractions and decimals), converting between forms as needed. Assess the reasonableness of answers using mental computation and estimation strategies.	Find three consecutive integers when given their sum.	SMMA_LO_01639
		Identify the best estimate for a sum using data in a table (three- and four-digit addends).	SMMA_LO_01620
		Students use calculations on rational numbers to figure out the speed at which James Cameron descended into Mariana Trench	SMMA_LO_02514
		Identify the most reasonable answer to a multiplication problem involving money.	SMMA_LO_01278
		Identify the most reasonable quantity for a context (order of magnitude differs).	SMMA_LO_01586
		Identify the expression that gives the best estimate for an addition or subtraction problem in context (two-digit numbers).	SMMA_LO_01566
		Determine the reasonableness of a sum or difference (two- and three-digit numbers).	SMMA_LO_01259

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		Estimate the quotient in a long division problem (three-digit dividend, two-digit divisor, remainder).	SMMA_LO_00301
		Estimate the sum, product, or quotient in problems with fractions.	SMMA_LO_01095
		Identify the best estimate for a quotient (decimal divided by a whole number).	SMMA_LO_00238
		Identify the most reasonable answer to a division problem involving money.	SMMA_LO_01279
		Identify the probable error in a multiplication calculation with decimals.	SMMA_LO_00250
		Multiplication and Division Targeted Lesson 15: One-Step Word Problems	
		Addition and Subtraction Targeted Lesson 23: Adding and Subtracting Four-Digit Numbers	
		Addition and Subtraction Targeted Lesson 13: Introducing Two-Step Word Problems	
		Identify a reasonable answer for a division problem.	SMMA_LO_00246
		Estimate the product by rounding each factor (a two-digit number by a three-digit number)	SMMA_LO_01622
		Identify the best estimate of a sum, difference, or product.	SMMA_LO_00231
		Estimate the product of three factors (1,000 to 350,000).	SMMA_LO_01099
AF.9	Use variables to represent quantities in real-world or mathematical problems and construct algebraic expressions, equations, and inequalities to solve problems by reasoning about the quantities.	Complete the steps to solve for x in $ax + b = c$.	SMMA_LO_00383
		Solve a one-step equation (subtraction).	SMMA_LO_01688
		Solve for a or b in $a \div b = c$ (combinations $2 \div 10$ to $5 \div 12$).	SMMA_LO_00359

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		Identify the number sentence that can be used to solve a two-step problem in context.	SMMA_LO_01297
		Solve for x in $ax = b$ (products from $-(4 \times 4)$ to $-(9 \times 9)$).	SMMA_LO_00390
		Solve a two-step equation (decimals).	SMMA_LO_01851
		Identify an expression that can be used to solve a problem (inverse operations).	SMMA_LO_01275
		Identify the expression that represents a division problem in context; then solve the problem (dividends 12 to 81).	SMMA_LO_01605
		Solve a one-step equation in context (subtraction, two-digit whole numbers).	SMMA_LO_01744
		Solve for a or b in $a \times b = x$ (products 2×20 to 12×90 , multiples of 10).	SMMA_LO_00366
		Use a model and an equation to solve word problems involving the addition of fractions with like denominators.	SMMA_LO_02004
		Solve a one-step equation in context (division, two-digit whole numbers).	SMMA_LO_01747
		Solve for a in a two-step equation in context.	SMMA_LO_01638
		Solve for a or b in $a - b = c$ (minuends 20 to 99, no regrouping).	SMMA_LO_00343
		Solve for a or b in $a - b = c$ (decimals to hundredths, regrouping).	SMMA_LO_00374
		Solve for a or b in $a - b = c$ (decimals to tenths, regrouping).	SMMA_LO_00368
		Solve a one-step equation (multiplication and division, integers).	SMMA_LO_01800
		Identify whole numbers on a number line that satisfy the inequality (0 to 10).	SMMA_LO_01023
		Solve a two-step multiplication and addition problem in context.	SMMA_LO_01633
		Complete the steps to solve for x in $ax - b = c$ (x is from -9 to 2).	SMMA_LO_00393

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		Solve for a, b, c, or d in $a/b \div c/d = e/f$.	SMMA_LO_00377
		Solve a two-step equation (fractions, multiplication).	SMMA_LO_01850
		Solve for a or b in $a \div b = c$ (up to 4-digit decimals).	SMMA_LO_00378
		Solve a two-step equation (integers).	SMMA_LO_01846
		Solve for a or b in $a \div b = c$.	SMMA_LO_00352
		Solve for a, b, or c in $a \div b/c = d/e$ (combinations to $12 \div 12$).	SMMA_LO_00371
		Solve a division problem about money with extra information (round quotient to the nearest whole number).	SMMA_LO_01585
		Ratios and Equations Targeted Lesson 25: The Addition Property of Equality	
		Solve a one-step equation (integers, multiplication and division).	SMMA_LO_01845
		Solve for a in $a + b = c$ or $a - b = c$ in steps (whole number sums and differences 2 to 20).	SMMA_LO_00379
		Solve a two-step addition problem to find a person's age in 5 to 20 years from now.	SMMA_LO_01631
		Solve for a or c in $(a/b - c/b = d/b)$ (minuends $2/3$ to $11/12$).	SMMA_LO_00360
		Solve for c in $a - b = c$ (minuends 20 to 99, regrouping).	SMMA_LO_00342
		Identify the missing variable of addition or subtraction equations (sums 10 to 50, minuends 10 to 50).	SMMA_LO_01687
		Solve for a in $a/b = c$.	SMMA_LO_01798
		Represent solutions for one-variable, one-step equations and inequalities on a number line.	SMMA_LO_00357
		Solve for a or b in $a \times b = c$ (products from 0.2×0.6 to 0.9×0.9).	SMMA_LO_00369
		Solve for a variable in the formula for volume of a rectangular prism (whole numbers and mixed numbers).	SMMA_LO_01817
		Solve for a or b in $a + b = c$ (sums 10 to 18).	SMMA_LO_00332

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		Solve for a or b in $a + b = c$ (sums 0 to 9).	SMMA_LO_00330
		Use a model and an equation to solve word problems involving the subtraction of fractions with like denominators.	SMMA_LO_02016
		Solve for a or b in $a + b = c$ (sums 101 to 199, no regrouping).	SMMA_LO_00345
		Solve for a or b in $a \times b = c$ (products 1×2 to 5×9).	SMMA_LO_00351
		Ratios and Equations Targeted Lesson 28: Solving Inequalities	
		Multiplication and Division Targeted Lesson 13: Multiplication and Division	
		Solve for a or b in $a + b = c$ (sums 10 to 108).	SMMA_LO_00336
		Solve a one-step equation (multiplication, decimals).	SMMA_LO_01797
		Solve for a or c in $a/b + c/b = d/b$ (sums $2/3$ to $11/12$).	SMMA_LO_00356
		Solve for a in $ba/c = d$ by multiplying by the reciprocal.	SMMA_LO_01795
		Solve for a or b in $a + b = c$ (sums 12 to 98).	SMMA_LO_00341
		Solve for a or b in $a \div b = c$ (combinations $0.6 \div 0.6$ to $0.9 \div 0.9$).	SMMA_LO_00370
		Solve for a or b in $a \times b = c$ (products 6×2 to 9×12).	SMMA_LO_00357
		Solve a one-step equation (addition, sums to 100).	SMMA_LO_01686
		Solve a one-step equation (multiplication).	SMMA_LO_01690
		Solve for c in $a - b = c$ (minuends 20 to 99, subtrahends 1 to 9, no regrouping).	SMMA_LO_00338
		Complete the steps to solve for x in $ax + b = c$ (x is from -9 to -1).	SMMA_LO_00392
		Match equations and inequalities with real-world situations.	SMMA_LO_02140
		Identify two numbers that make an inequality true (two-digit).	SMMA_LO_00997
		Solve one-step equations (addition and subtraction, fractions).	SMMA_LO_01796

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		Solve a one-step equation (two-digit integers, addition and subtraction).	SMMA_LO_01844
		Solve for a in $a - b = c$ (differences from -19 to 11).	SMMA_LO_00389
		Solve for x in $ax + b = c$.	SMMA_LO_00384
		Solve for a or b in $a - b = c$ (differences 0 to 9).	SMMA_LO_00331
		Complete the steps to solve for a in $a \div b = c$ (combinations 4 x 4 to 9 x 10).	SMMA_LO_00381
		Solve for a or b in $a \times b = x$ (products 2 x 10 to 12 x 12).	SMMA_LO_00363
		Solve a one-step equation in context (division, two-digit whole numbers).	SMMA_LO_01745
		Solve for a or b in $a - b = c$ (differences 0 to 18).	SMMA_LO_00333
		Solve for a or b in $a \times b = c$ (products from 0.02 x 0.13 to 0.09 x 0.19).	SMMA_LO_00376
		Identify two numbers that make an inequality true (0 to 9).	SMMA_LO_00994
		Ratios and Equations Targeted Lesson 26: The Multiplication Property of Equality	
		Solve for a or c in $a/b - c/b = d/b$ (improper fractions, minuends 4/3 to 35/12).	SMMA_LO_00362
		Complete the steps to solve for x in $a - x = b$.	SMMA_LO_00396
		Solve for a, b, or c in $a/b \div c = d/e$ (combinations to 12 \div 12).	SMMA_LO_00375
		Solve for x in $ax = c$ in steps (products 4 x 4 to 9 x 10).	SMMA_LO_00380
		Solve for c in $a - b = c$ (differences 1 to 9).	SMMA_LO_00324
		Solve a one-step equation in context (addition, two-digit whole numbers).	SMMA_LO_01743
		Solve for a or b in $a - b = c$ (minuends 21 to 99, subtrahends 1 to 9, no regrouping).	SMMA_LO_00347
		Solve for a or b in $a \div b = c$ (combinations 6 \div 10 to 9 \div 12).	SMMA_LO_00361
		Solve a one-step equation (fractions, addition and subtraction).	SMMA_LO_01848
		Solve for a in $a/b = c$ (products from $-(4 \times 4)$ to $-(9 \times 9)$).	SMMA_LO_00391

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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 in $a + b = c$ (a is from -20 to -1).	SMMA_LO_00388
		Write and use inequalities to decide whether vegetables in a processing plant meet quality standards	SMMA_LO_02511
		Solve for x in $-x = a$ (numbers from -99 to 99).	SMMA_LO_00395
		Solve for c in $a - b = c$ (differences 1 to 9).	SMMA_LO_00329
		Solve a one-step equation (addition and subtraction, one-digit integers).	SMMA_LO_01801
		Solve for a in $ba/c = d$ by multiplying by the reciprocal.	SMMA_LO_00382
		Solve a one-step equation with decimals in context (addition and subtraction).	SMMA_LO_01799
		Identify related multiplication and division number sentences that can be used to solve a problem.	SMMA_LO_01080
		Identify a number sentence that could be used to solve a multiplication problem.	SMMA_LO_01270
		Solve for a or b in $a \div b = c$.	SMMA_LO_00354
		Solve a one-step equation (fractions, multiplication and division).	SMMA_LO_01847
		Solve for a or b in $a + b = c$ (decimals to tenths, no regrouping).	SMMA_LO_00367
		Solve for a, b, c, or d in $a/b \times c/d = e/f$ (combinations to 12 x 12).	SMMA_LO_00372
		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 a, b, or c in $a + b + c = d$ (sums 10 to 19).	SMMA_LO_00335
		Generate and solve an equation with variables on both sides of the equal sign in a real-world context.	SMMA_LO_02145
		Ratios and Equations Targeted Lesson 27: Writing and Solving Equations from Situations	

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		Solve a one-step equation (fractions, addition and subtraction).	SMMA_LO_01868
		Solve a one-step equation (decimal integers, multiplication and division).	SMMA_LO_01849
		Solve for a or b in $a \div b = c$ (combinations $6 \div 20$ to $9 \div 90$, multiples of 10).	SMMA_LO_00365
		Solve a one-step equation (division).	SMMA_LO_01692
		Solve for a variable in the formula for simple interest (whole numbers and decimals).	SMMA_LO_01805
		Solve for c in $a - b = c$ (minuends 20 to 99, two-digit subtrahends, no regrouping).	SMMA_LO_00340
		Solve for a or b in $a + b = c$ (decimals to hundredths).	SMMA_LO_00373
AF.9.a	Solve word 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 $ax + b = c$.	SMMA_LO_00383
		Complete the steps to solve for x in $ax - b = c$ (x is from -9 to 2).	SMMA_LO_00393
		Solve for a or c in $a/b - c/b = d/b$ (minuends $2/3$ to $11/12$).	SMMA_LO_00360
		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
		Solve for x in $ax + b = c$.	SMMA_LO_00384
		Determine whether a given value for x is a solution for $ax + b = c$ (x is from -9 to 9).	SMMA_LO_00397
		Solve for a or c in $a/b - c/b = d/b$ (improper fractions, minuends $4/3$ to $35/12$).	SMMA_LO_00362
		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 $a/b + c/b = d/b$ (improper fractions, sums $4/3$ to $35/12$).	SMMA_LO_00364

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AF.9.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.	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
DSP	Data Analysis, Statistics, and Probability		
	Make inferences about a population using random sampling.		
DSP.10	Examine a sample of a population to generalize information about the population.	Compare estimates and variation in two samples.	SMMA_LO_02218
DSP.10.b	Compare sampling techniques to determine whether a sample is random and thus representative of a population, explaining that random sampling tends to produce representative samples and support valid inferences.	Identify representative samples of a population.	SMMA_LO_02203
DSP.10.c	Determine whether conclusions and generalizations can be made about a population based on a sample.	Identify representative samples of a population.	SMMA_LO_02203
DSP.10.e	Informally explain situations in which statistical bias may exist.	Compare estimates and variation in two samples.	SMMA_LO_02218
	Make inferences from an informal comparison of two populations.		
DSP.12	Make informal comparative inferences about two populations using measures of center and variability and/or mean absolute deviation in context.	Compare estimates and variation in two samples.	SMMA_LO_02218
		Determine the range, mean, or median of a data set in context.	SMMA_LO_02175
	Investigate probability models.	Given a sentence describing an observed event, label a future occurrence as certain, possible, or impossible.	SMMA_LO_01143

Alabama Mathematics Standards Code	Alabama Mathematics Course of Study 2019 Grade 7	SuccessMaker Item Description	Item ID
		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 information about a current situation, classify a future event as being certain, possible, or impossible.	SMMA_LO_01139
		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 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
		Within the context of repeated selections without replacement from a bag containing two balls of the same color, label events as certain or impossible.	SMMA_LO_01141
		Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.	SMMA_LO_01224
DSP.13	Use a number from 0 to 1 to represent the probability of a chance event occurring, explaining that larger numbers indicate greater likelihood of the event occurring, while a number near zero indicates an unlikely event.	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
		Given a sentence describing an observed event, label a future occurrence as certain, possible, or impossible.	SMMA_LO_01143

Alabama Mathematics Standards Code	Alabama Mathematics Course of Study 2019 Grade 7	SuccessMaker Item Description	Item ID
		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 information about a current situation, classify a future event as being certain, possible, or impossible.	SMMA_LO_01139
		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
		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 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
		Determine whether a chronological event is certain or impossible.	SMMA_LO_01137
		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 graphical representation of an urn containing balls of three colors, determine qualitatively which event is more probable to occur.	SMMA_LO_01163

Alabama Mathematics Standards Code	Alabama Mathematics Course of Study 2019 Grade 7	SuccessMaker Item Description	Item ID
		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
		Write a fraction to express the probability of an event.	SMMA_LO_01667
		Within the context of repeated selections without replacement from a bag containing two balls of the same color, label events as certain or impossible.	SMMA_LO_01141
		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 bowl containing marbles of two colors, represent on a qualitative ordinal scale the probability of an event and its complement.	SMMA_LO_01171
		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.	SMMA_LO_01215
		Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.	SMMA_LO_01224
		Determine the probability of an event.	SMMA_LO_01197

Alabama Mathematics Standards Code	Alabama Mathematics Course of Study 2019 Grade 7	SuccessMaker Item Description	Item ID
DSP.14	Define and develop a probability model, including models that may or may not be uniform, where uniform models assign equal probability to all outcomes and non-uniform models involve events that are not equally likely.	Make predictions based on a sample.	SMMA_LO_01223
DSP.14.a	Collect and use data to predict probabilities of events.	Make predictions based on a sample.	SMMA_LO_01223
		Predict the effect of changing temperatures on the weather.	SMMA_LO_01312
DSP.15	Approximate the probability of an event using data generated by a simulation (experimental probability) and compare it to the theoretical probability.	Determine theoretical and experimental probabilities.	SMMA_LO_02204
DSP.16	Find probabilities of simple and compound events through experimentation or simulation and by analyzing the sample space, representing the probabilities as percents, decimals, or fractions.	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
		Given a sentence describing an observed event, label a future occurrence as certain, possible, or impossible.	SMMA_LO_01143
		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 information about a current situation, classify a future event as being certain, possible, or impossible.	SMMA_LO_01139
		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
		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

Alabama Mathematics Standards Code	Alabama Mathematics Course of Study 2019 Grade 7	SuccessMaker Item Description	Item ID
		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
		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 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
		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 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
		Write a fraction to express the probability of an event.	SMMA_LO_01667
		Within the context of repeated selections without replacement from a bag containing two balls of the same color, label events as certain or impossible.	SMMA_LO_01141

Alabama Mathematics Standards Code	Alabama Mathematics Course of Study 2019 Grade 7	SuccessMaker Item Description	Item ID
		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 bowl containing marbles of two colors, represent on a qualitative ordinal scale the probability of an event and its complement.	SMMA_LO_01171
		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.	SMMA_LO_01215
		Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.	SMMA_LO_01224
		Determine the probability of an event.	SMMA_LO_01197
DSP.16.a	Represent sample spaces for compound events using methods such as organized lists, tables, and tree diagrams, and determine the probability of an event by finding the fraction of outcomes in the sample space for which the compound event occurred.	Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.	SMMA_LO_01224
DSP.16.b	Design and use a simulation to generate frequencies for compound events.	Identify a simulation to accurately determine the probability of compound events.	SMMA_LO_02205
		Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.	SMMA_LO_01224
DSP.16.c	Represent events described in everyday language in terms of outcomes in the sample space which composed the event.	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_01218

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		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.	SMMA_LO_01219
		Given a graphical representation of two spinners, count all the possible outcomes for spinning each spinner once.	SMMA_LO_01665
GM	Geometry and Measurement		
	Construct and describe geometric figures, analyzing relationships among them.		
GM.17	Solve problems involving scale drawings of geometric figures, including computation of actual lengths and areas from a scale drawing and reproduction of a scale drawing at a different scale.	Interpret scale drawings (metric and customary units of length).	SMMA_LO_00846
		Determine distances from scale drawings (inches to miles, cm to km).	SMMA_LO_00815
GM.18	Construct geometric shapes (freehand, using a ruler and a protractor, and using technology), given a written description or measurement constraints with an emphasis on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Determine if triangles can be constructed with given sides and angles.	SMMA_LO_02176
		Draw a line segment using a ruler (to 1/4 inch and 0.5 cm).	SMMA_LO_00800
GM.19	Describe the two-dimensional figures created by slicing three-dimensional figures into plane sections.	Identify the cross section of a three-dimensional figure.	SMMA_LO_00668
	Solve real-world and mathematical problems involving angle measure, circumference, area, surface area, and volume.	Multiplication and Division Targeted Lesson 28: Area and Perimeter Word Problems	
		Multiplication and Division Targeted Lesson 26: Solving Area Word Problems	

Alabama Mathematics Standards Code	Alabama Mathematics Course of Study 2019 Grade 7	SuccessMaker Item Description	Item ID
		Find the measure of the missing angle in a diagram.	SMMA_LO_00674
		Solve a problem involving equal angle measures.	SMMA_LO_00677
GM.20	Explain the relationships among circumference, diameter, area, and radius of a circle to demonstrate understanding of formulas for the area and circumference of a circle.	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
GM.20.a	Informally derive the formula for area of a circle.	Measure the diameter of a circle, and then determine the area.	SMMA_LO_01781
GM.22	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 rectangular prisms.	Multiplication and Division Targeted Lesson 28: Area and Perimeter Word Problems	
		Multiplication and Division Targeted Lesson 26: Solving Area Word Problems	

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