



SuccessMaker®

**Arkansas Mathematics Curriculum Framework 2016
Grade 4**

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

Arkansas Standards Codes	Arkansas Mathematics Curriculum Framework 2016 Grade 4	SuccessMaker Item Description	Item ID
AR.Math.Content.OA	Operations and Algebraic Thinking		
AR.Math.Content.OA.A	Use the four operations with whole numbers to solve problems.		
AR.Math.Content.OA.A.1a	Interpret a multiplication equation as a comparison (e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5).	Multiplication and Division Targeted Lesson 6: Writing Comparison Situations	
		Interpret a multiplication equation by writing a comparison statement.	SMMA_LO_02025
		Multiplication and Division Targeted Lesson 5: Comparison Situations	
		Translate a verbal statement of a multiplicative comparison into a multiplication equation.	SMMA_LO_02008
		Use a model to represents a word problem involving multiplicative comparison. Then, use an equation to represent the solution to the word problem.	SMMA_LO_02009
AR.Math.Content.OA.A.1b	Represent verbal statements of multiplicative comparisons as multiplication equations.	Multiplication and Division Targeted Lesson 5: Comparison Situations	
		Translate a verbal statement of a multiplicative comparison into a multiplication equation.	SMMA_LO_02008

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		Use a model to represents a word problem involving multiplicative comparison. Then, use an equation to represent the solution to the word problem.	SMMA_LO_02009
AR.Math.Content.OA.A.2a	Multiply or divide to solve word problems involving multiplicative comparison.	Multiplication and Division Targeted Lesson 6: Writing Comparison Situations	
		Multiplication and Division Targeted Lesson 5: Comparison Situations	
		Use a model to represents a word problem involving multiplicative comparison. Then, use an equation to represent the solution to the word problem.	SMMA_LO_02009
		Identify a picture that represents a division problem (math facts).	SMMA_LO_01245
		Identify the expression that represents a division problem in context; then solve the problem (dividends 12 to 81).	SMMA_LO_01605
AR.Math.Content.OA.A.2b	Use drawings and equations with a letter for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	Make a picture to solve a multiplication problem involving total cost (2 to 5 items, 5, 10, or 15 cents each).	SMMA_LO_01584
		Identify a picture that represents a multiplication problem (basic facts).	SMMA_LO_01246

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		Make a picture to solve a multistep addition and multiplication problem in context.	SMMA_LO_01592
		Make a picture to solve a multiplication problem (basic facts).	SMMA_LO_01237
		Multiplication and Division Targeted Lesson 5: Comparison Situations	
		Use a model to represents a word problem involving multiplicative comparison. Then, use an equation to represent the solution to the word problem.	SMMA_LO_02009
AR.Math.Content.OA.A.3a	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity.	Find the combined area of two walkways and the total cost of paving stones to cover the walkway.	SMMA_LO_02501
		Identify the operation from pictures and contexts up to 20.	SMMA_LO_00321
		Act out the solution to multi-step problem in context (addends, minuends 1 to 4).	SMMA_LO_01538
		Multiplication and Division Targeted Lesson 35: Interpreting Remainders	
		Make a picture to solve a multistep addition and multiplication problem in context.	SMMA_LO_01592

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		Figure the expected expenses and income to help decide if it is worth setting up a Taco Truck at the county fair.	SMMA_LO_02503
AR.Math.Content.OA.A.3b	Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	Identify the best estimate of a sum, difference, or product.	SMMA_LO_00231
		Identify the best estimate for a sum using data in a table (three- and four-digit addends).	SMMA_LO_01620
		Identify the expression that gives the best estimate for an addition or subtraction problem in context (two-digit numbers).	SMMA_LO_01566
		Identify the most reasonable quantity for a context (order of magnitude differs).	SMMA_LO_01586
AR.Math.Content.OA.B	Gain familiarity with factors and multiples.		
AR.Math.Content.OA.B.4a	Find all factor pairs for a whole number in the range 1-100. Note: Informal classroom discussion might include divisibility rules, finding patterns and other strategies.	Find the factors of a number and determine if the number is prime or composite (3 to 30).	SMMA_LO_01073
		Determine three factors of a given number.	SMMA_LO_01107
		Identify the complete set of factors for a number (2 to 25).	SMMA_LO_01071
		Identify the number that is divisible by a given factor (numbers 2 to 81, factors 2 to 9).	SMMA_LO_01066
AR.Math.Content.OA.B.4b	Recognize that a whole number is a multiple of each of its factors. Note:	Identify numbers that are multiples of a given number.	SMMA_LO_01069

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	Informal classroom discussion might include divisibility rules, finding patterns and other strategies.		
AR.Math.Content.OA.B.4d	Determine whether a given whole number in the range 1-100 is prime or composite. Note: Informal classroom discussion might include divisibility rules, finding patterns and other strategies.	Identify sets of prime and composite numbers.	SMMA_LO_01119
AR.Math.Content.OA.C	Generate and analyze patterns.		
AR.Math.Content.OA.C.5a	Generate a number or shape pattern that follows a given rule.	Find the missing decimal number in a pattern (addition).	SMMA_LO_00253
		Generate a table of values given a rule.	SMMA_LO_01724
AR.Math.Content.OA.C.5b	Identify apparent features of the pattern that were not explicit in the rule itself.	Find the missing two-digit number in a sequence of odd or even numbers.	SMMA_LO_01002
		Look for a pattern to solve a problem.	SMMA_LO_01276
		Match patterns of geometric figures.	SMMA_LO_00539
		Identify the missing geometric figure in a 1-2-1-2 pattern.	SMMA_LO_00591
		Identify the missing picture in a 1-2-3-1-2-3 pattern.	SMMA_LO_00607
AR.Math.Content.NBT	Number and Operations in Base Ten		
AR.Math.Content.NBT.A	Generalize place value understanding for multi-digit whole numbers.		
AR.Math.Content.4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.	Identify the place and the value of a digit in a number; for that value, identify the number 10 times as much and the number 1/10 as much.	SMMA_LO_02045
		Addition and Subtraction Targeted Lesson 29: Place Value of Numbers	

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		Up to Six Digits	
AR.Math.Content.NBT.A.2a	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form.	Identify a number, model, or word with the same value (1 to 9).	SMMA_LO_00965
		Enter the number shown (1 to 9).	SMMA_LO_00942
		Enter the number shown (1 to 5).	SMMA_LO_00932
		Enter the number for a word name (two-digit).	SMMA_LO_01001
		Identify a word name for a four-, five- or six-digit numbers.	SMMA_LO_01043
		Identify a number from a spoken number (1 to 5).	SMMA_LO_00937
		Enter the number equal to a given number of ones and tens (0 to 9 tens, 1 to 9 ones).	SMMA_LO_00979
		Identify the word name for a three-digit number.	SMMA_LO_01009
		Enter the number of ones equal to number 1 to 9.	SMMA_LO_00973
		Identify a number from a spoken number (6 to 9).	SMMA_LO_00944
		Enter the number for a word name (100 to 999).	SMMA_LO_01042
		Relate word names, expanded form, and numbers of four-digit numbers.	SMMA_LO_02214
		Identify a written number from a spoken number (two-digit).	SMMA_LO_00977
		Identify the number of objects for a word name. (1 to 9 objects).	SMMA_LO_00964
		Enter the number shown (0 to 4).	SMMA_LO_00001

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AR.Math.Content.NBT.A.2b	Compare two multi-digit numbers based on meanings of the digits in each place, using symbols ($>$, $=$, $<$) to record the results of comparisons.	Addition and Subtraction Targeted Lesson 30: Rounding and Comparing Numbers Through Hundred Thousands	
		Compare two whole numbers (three to seven-digit numbers).	SMMA_LO_01711
		Addition and Subtraction Targeted Lesson 27: Comparing Numbers to 100	
		Addition and Subtraction Targeted Lesson 28: Comparing Numbers to 1,000	
AR.Math.Content.4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.	Round four- five- and six-digit numbers to a given place.	SMMA_LO_01106
		Addition and Subtraction Targeted Lesson 30: Rounding and Comparing Numbers Through Hundred Thousands	
		Round a three- to five-digit number to the nearest hundred.	SMMA_LO_01081
AR.Math.Content.NBT.B	Use place value understanding and properties of operations to perform multi-digit arithmetic.		
AR.Math.Content.4.NBT.B.4	Add and subtract multi-digit whole numbers with computational fluency using a standard algorithm.	Subtract vertically (minuends 11 to 19, subtrahends 1 to 9, no regrouping).	SMMA_LO_01445
		Subtract two-digit numbers with regrouping (vertical presentation).	SMMA_LO_01463
		Add two addends vertically (sums 10 to 18).	SMMA_LO_00041

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		Practice subtraction using basic facts; minuends, subtrahends less than or equal to 12.	SMMA_SG_00650
		Practice subtraction using basic facts; minuends, subtrahends less than or equal to 12.	SMMA_SG_00690
		Subtract vertically using basic math facts (minuends 15 to 18, subtrahends 6 to 9).	SMMA_LO_01444
		Subtract 1 from a number (two-digit minuends, no regrouping, presented vertically).	SMMA_LO_01427
		Subtract a multiple of 10 from a 2-digit number (minuends 11-99, vertical presentation).	SMMA_LO_01452
AR.Math.Content.NBT.B.5a	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations.	Multiply a two-digit number by a two-digit number (student choice, products 16 x 11 to 19 x 99).	SMMA_LO_00901
		Multiply a two-digit number by a one-digit number (products 10 x 2 to 12 x 12).	SMMA_LO_00871
		Multiply a two-digit number by a one-digit number (student choice, products 10 x 2 to 15 x 5).	SMMA_LO_00870
		Multiplication and Division Targeted Lesson 32: Multiplying by Two-Digit Numbers	
		Represent the product of 2 two-digit	SMMA_LO_00884

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		numbers using arrays, area models, or equations.	
		Multiply a two-digit number by a one-digit number (student choice, products 16 x 6 to 19 x 9).	SMMA_LO_00876
		Multiply a 1-digit number by a 2-digit number (products 12 x 6 to 19 x 9).	SMMA_LO_00896
		Multiply a two-digit number by a one-digit number (student choice, vertical, products 10 x 1 to 12 x 4).	SMMA_LO_00869
		Multiply a 1-digit number by a 2-digit number (products 13 x 1 to 19 x 5).	SMMA_LO_00894
		Multiply a two-digit number by a one-digit number (student choice, products 21 x 2 to 99 x 9).	SMMA_LO_00880
		Multiply a two-digit number by a one-digit number (student choice, products 10 x 6 to 15 x 9).	SMMA_LO_00874
		Multiply a two-digit number by a one-digit number (student choice, products 16 x 2 to 19 x 5).	SMMA_LO_00872
		Multiply a one-digit number by a two-digit number (products 2 x 12 to 9 x 12).	SMMA_LO_00875
		Multiply a three-digit number by a one-digit number (student choice, products 100 x 2 to 990 x 9, multiples of 10).	SMMA_LO_00882
		Multiply whole numbers (products 2 x 20 to 90 x 9,	SMMA_LO_00885

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		multiples of 10).	
		Multiply a four-digit number by a one-digit number (student choice, products 1000 x 2 to 9999 x 9).	SMMA_LO_00892
AR.Math.Content.NBT.B.5b	Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. Note: Properties of operations need to be referenced.	Use an area model to solve a multiplication problem (two-digit factors).	SMMA_LO_01734
AR.Math.Content.4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Divide (combinations 6 x 20 to 9 x 90).	SMMA_LO_00293
		Divide using the long division algorithm (one-digit divisor, remainder).	SMMA_LO_00292
		Practice division using basic facts; dividend, divisor less than or equal to 20.	SMMA_SG_00670
		Practice division using basic facts; dividend, divisor less than or equal to 30.	SMMA_SG_00740
		Divide using the long division algorithm (one-digit divisor, remainder).	SMMA_LO_00295
		Practice division using basic facts; dividend, divisor less than or equal to 100.	SMMA_SG_00840
		Practice division using basic facts; dividend, divisor less	SMMA_SG_00770

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		than or equal to 50.	
		Practice division using basic facts; dividend, divisor less than or equal to 30.	SMMA_SG_00720
		Practice division using basic facts; dividend, divisor less than or equal to 50.	SMMA_SG_00780
		Practice division using basic facts; dividend, divisor less than or equal to 100.	SMMA_SG_00820
		Practice division using basic facts; dividend, divisor less than or equal to 20.	SMMA_SG_00620
		Practice division using basic facts; dividend, divisor less than or equal to 100.	SMMA_SG_00880
		Divide (combinations 2 x 20 to 5 x 90, three-digit dividend, one or two-digit divisor, no remainder).	SMMA_LO_00291
		Practice division using basic facts; dividend, divisor less than or equal to 50.	SMMA_SG_00810
		Divide (combinations 2 x 13 to 5 x 19, no remainder).	SMMA_LO_00305
		Practice division using basic facts; dividend, divisor less than or equal to 30.	SMMA_SG_00730
		Practice division using basic facts; dividend, divisor less than or equal to 20.	SMMA_SG_00600

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AR.Math.Content.NF	Number and Operations-Fractions Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.		
AR.Math.Content.NF.A	Generalize place value understanding for multi-digit whole numbers.		
AR.Math.Content.NF.A.1a	By using visual fraction models, explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ with attention to how the number and size of the parts differ even though the two fractions themselves are the same size.	Use a model to compare two fractions (halves to eighths, unlike denominators).	SMMA_LO_00429
		Compare fractions and recognize equivalent fractions to help decide if the bee population is getting shorter.	SMMA_LO_02502
		Using models, compare fractions (unlike denominators, halves to sixteenths).	SMMA_LO_00436
		Using models, find equivalent fractions (halves to twelfths).	SMMA_LO_00433
		Identify the fraction equivalent to the given fraction.	SMMA_LO_01793
		Fractions and Decimals Targeted Lesson 7: Equivalent Fraction Set Models	
		Fractions and Decimals Targeted Lesson 5: Fractions Using Models	
		Identify two equivalent fractions for $1/2$.	SMMA_LO_01708

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		Using models, compare fractions (unlike denominators, numerators equal to one, halves to sixteenths).	SMMA_LO_00435
		Using models, add fractions, no simplifying (like denominators, thirds to eighths).	SMMA_LO_00441
		Using models, compare fractions (unlike denominators, halves to eighths).	SMMA_LO_00438
AR.Math.Content.NF.A.1b	Use this principle to recognize and generate equivalent fractions.	Compare fractions and recognize equivalent fractions to help decide if the bee population is getting shorter.	SMMA_LO_02502
		Generate a table of equivalent fractions for a fraction not in simplest form.	SMMA_LO_01792
		Generate a table of equivalent fractions for a fraction in simplest form.	SMMA_LO_01791
		Determine the equivalent fractions using the least common denominator of two given fractions.	SMMA_LO_00494
		Using models, find equivalent fractions (halves to twelfths).	SMMA_LO_00433
		Identify the fraction equivalent to the given fraction.	SMMA_LO_01793
		Identify fractions that are equivalent to a given negative fraction.	SMMA_LO_02087
		Find an equivalent fraction of a simplified fraction (simplified fractions $\frac{1}{2}$ to $\frac{8}{9}$).	SMMA_LO_00457

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		Fractions and Decimals Targeted Lesson 7: Equivalent Fraction Set Models	
		Find the missing numerator or denominator in an equivalent fraction (simplified fractions 1/2 to 7/8).	SMMA_LO_00453
		Identify two equivalent fractions for 1/2.	SMMA_LO_01708
		Fractions and Decimals Targeted Lesson 6: Equivalent Fraction Area Models	
		Find three equivalent fractions (simplified fractions 1/2 to 8/9).	SMMA_LO_00458
		Find the missing numerator or denominator in an equivalent fraction (simplified fractions 1/2 to 3/4).	SMMA_LO_00451
AR.Math.Content.NF.A.2a	Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$).	Identify the greatest or least fraction in a problem (unlike denominators).	SMMA_LO_00482
		Use a model to compare two fractions (halves to eighths, unlike denominators).	SMMA_LO_00429
		Using models, compare fractions (unlike denominators, halves to sixteenths).	SMMA_LO_00436
		Determine the equivalent fractions using the least common denominator of two given fractions.	SMMA_LO_00494

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		Compare decimals (to hundredths) to benchmark fractions.	SMMA_LO_00209
		Using models, compare fractions (unlike denominators, numerators equal to one, halves to sixteenths).	SMMA_LO_00435
		Compare fractions (unlike denominators, to ninths).	SMMA_LO_00495
		Identify the fraction that is greater than a given fraction (unlike denominators, halves to eighths).	SMMA_LO_00437
		Using models, compare fractions (unlike denominators, halves to eighths).	SMMA_LO_00438
		Compare fractions (unlike denominators).	SMMA_LO_00462
AR.Math.Content.NF.A.2b	Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols ($>$, $=$, $<$), and justify the conclusions (e.g., by using a visual fraction)	Add and subtract mixed numbers to help a botanist compare the growth rates of plants in an experiment.	SMMA_LO_02504
AR.Math.Content.NF.B	Build fractions from unit fractions by applying and extending previous understanding of operations of whole numbers.		
AR.Math.Content.4.NF.B.3	Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$ (e.g., $3/8 = 1/8 + 1/8 + 1/8$). (e.g., $7 \frac{1}{5} = 7 + 1/5 = 35/5 + 1/5 = 36/5$)		

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AR.Math.Content.4.NF.B.3.a	Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	Add two fractional parts of whole numbers in context.	SMMA_LO_01640
		Subtract two fractions from a whole within a context.	SMMA_LO_01634
AR.Math.Content.4.NF.B.3.b	Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation and justify decompositions (e.g., by using a visual fraction model) (e.g., $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$; $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$; $2\frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$).	Fractions and Decimals Targeted Lesson 13: Fractions and Mixed Numbers	
		Determine addition expressions that are equivalent to a given fraction.	SMMA_LO_02146
		Use addition to find an equivalent fraction for $\frac{1}{2}$.	SMMA_LO_01706
		Represent a fraction $\frac{a}{b}$ as a sum of fractions $\frac{1}{b}$, where a and b are whole numbers and $b > 0$, including when $a > b$.	SMMA_LO_02191
AR.Math.Content.4.NF.B.3.c	Add and subtract mixed numbers with like denominators (e.g., by using properties of operations and the relationship between addition and subtraction and/or by replacing each number with an equivalent fraction).	Fractions and Decimals Targeted Lesson 19: Subtracting Mixed Numbers with Like Denominators	
		Add mixed numbers; simplify if necessary (like denominators, halves to sixteenths).	SMMA_LO_00463
		Subtract mixed numbers; simplify if necessary (like denominators).	SMMA_LO_00485

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		Add mixed numbers with like denominators in context; simplify if necessary.	SMMA_LO_01624
		Subtract mixed numbers; no simplifying (like denominators, thirds to twelfths).	SMMA_LO_00461
		Subtract mixed numbers in context; simplify if necessary (like denominators).	SMMA_LO_00481
		Fractions and Decimals Targeted Lesson 18: Adding Mixed Numbers with Like Denominators	
		Add mixed numbers; simplify if necessary (like denominators).	SMMA_LO_00484
		Add mixed numbers within a context; simplify if necessary (like denominators).	SMMA_LO_00480
		Add mixed numbers; no simplifying (like denominators, thirds to twelfths).	SMMA_LO_00460
AR.Math.Content.4.NF.B.3.d	Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators (e.g., by using visual fraction models and equations to represent the problem).	Fractions and Decimals Targeted Lesson 15: Adding Fractions with Like Denominators	
		Fractions and Decimals Targeted Lesson 13: Fractions and Mixed Numbers	
		Use a model and an equation to solve word problems involving the subtraction of fractions with like denominators.	SMMA_LO_02016
		Fractions and Decimals Targeted	

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		Lesson 25: Fraction Operations Word Problems	
		Add fractions with like denominators (no simplifying).	SMMA_LO_01709
		Solve one-step equations (addition and subtraction, fractions).	SMMA_LO_01796
		Solve a one-step equation (fractions, addition and subtraction).	SMMA_LO_01868
		Fractions and Decimals Targeted Lesson 16: Subtracting Fractions with Like Denominators	
		Use a model and an equation to solve word problems involving the addition of fractions with like denominators.	SMMA_LO_02004
AR.Math.Content.4.NF.B.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Note: Emphasis should be placed on the relationship of how the unit fraction relates to the multiple of the fraction.		
AR.Math.Content.4.NF.B.4.a	Understand a fraction a/b as a multiple of $1/b$. (e.g., Use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$).	Using a model, rewrite a whole number as a fraction (halves to eighths).	SMMA_LO_00443
		Use fraction models to relate a fraction to a whole number times a unit fraction. Then, write an equation for this relationship.	SMMA_LO_02005

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		Using a model, rewrite a mixed number as a fraction (halves to eighths).	SMMA_LO_00446
AR.Math.Content.4.NF.B.4.b	Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number. (e.g., Use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$, recognizing this product as $6/5$. (In general, $n \times (a/b) = (n \times a)/b$)).	Use fraction models to rewrite the product of a whole number and a fraction as the product of a whole number and a unit fraction. Then, find the product.	SMMA_LO_02006
		Model multiplication of a whole number by a fraction; complete an equation to show the product; interpret a real-world context that can be modeled by this equation.	SMMA_LO_02048
		Multiply a whole number by a proper fraction; no simplifying.	SMMA_LO_00470
		Multiply a fraction and a whole number; simplify.	SMMA_LO_00477
		Model the multiplication of two fractions; complete an equation to show the product; interpret a real-world context that can be modeled by this equation.	SMMA_LO_02054
		Using a model, rewrite a mixed number as a fraction (halves to eighths).	SMMA_LO_00446
		Fractions and Decimals Targeted Lesson 21: Multiplying Fractions by Whole Numbers	
		Multiply a fraction and a whole number; simplify first.	SMMA_LO_00478

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		Using pictures, find a fractional amount of a whole number (product of halves to fourths and 2 to 16).	SMMA_LO_00428
AR.Math.Content.4.NF.B.4.c	Solve word problems involving multiplication of a fraction by a whole number (e.g., by using visual fraction models and equations to represent the problem).	Model multiplication of a whole number by a fraction; complete an equation to show the product; interpret a real-world context that can be modeled by this equation.	SMMA_LO_02048
		Use fraction models to rewrite the product of a whole number and a fraction as the product of a whole number and a unit fraction. Then, find the product.	SMMA_LO_02006
		Multiply a whole number by a proper fraction; no simplifying.	SMMA_LO_00470
		Multiply a fraction and a whole number; simplify.	SMMA_LO_00477
		Use fraction models to relate a fraction to a whole number times a unit fraction. Then, write an equation for this relationship.	SMMA_LO_02005
		Fractions and Decimals Targeted Lesson 21: Multiplying Fractions by Whole Numbers	
		Multiply a fraction and a whole number; simplify first.	SMMA_LO_00478

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AR.Math.Content.NF.C	Understand decimal notation for fractions, and compare decimal fractions.		
AR.Math.Content.4.NF.C.5	Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.	Express a fraction with denominator 10 as an equivalent fraction with denominator 100. Then, add that fraction to another fraction with denominator 100.	SMMA_LO_02007
		Fractions and Decimals Targeted Lesson 26: Representing Tenths and Hundredths	
AR.Math.Content.4.NF.C.6	Use decimal notation for fractions with denominators 10 or 100.	Fractions and Decimals Targeted Lesson 26: Representing Tenths and Hundredths	
AR.Math.Content.NF.C.7a	Compare two decimals to hundredths by reasoning about their size.	Compare decimal numbers (to thousandths).	SMMA_LO_00225
		Compare decimal numbers (0.1 to 9.9).	SMMA_LO_00191
		Compare two decimal numbers (10.01 to 99.99).	SMMA_LO_00216
		Fractions and Decimals Targeted Lesson 30: Comparing Decimals	
		Add and compare decimals to hundredths to decide whether customers will save money.	SMMA_LO_02506
		Compare decimals (to hundredths) to benchmark fractions.	SMMA_LO_00209
AR.Math.Content.NF.C.7c	Record the results of comparisons using symbols ($>$, $=$, $<$), and justify the conclusions (e.g., by using a visual model).	Add and subtract mixed numbers to help a botanist compare the growth rates of plants in an experiment.	SMMA_LO_02504
AR.Math.Content.MD	Measurement and Data		

Arkansas Standards Codes	Arkansas Mathematics Curriculum Framework 2016 Grade 4	SuccessMaker Item Description	Item ID
AR.Math.Content.MD.A	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.		
AR.Math.Content.MD.A.1a	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec; yd, ft, in; gal, qt, pt, c.	Compare unlike customary units of capacity (cups, pints, quarts, and gallons).	SMMA_LO_00799
		Compare unlike metric units and identify the correct statement (mm, cm, m, km; mL, L; mg, g, kg).	SMMA_LO_00820
		Convert linear Measurements to the same unit in order to fill orders for solar panels.	SMMA_LO_02505
		Express yards and feet as an equivalent number of feet, or feet and inches as an equivalent number of inches.	SMMA_LO_00166
AR.Math.Content.MD.A.1b	Within a single system of measurement, express measurements in the form of a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.	Convert linear Measurements to the same unit in order to fill orders for solar panels.	SMMA_LO_02505
AR.Math.Content.MD.A.2a	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money including the ability to make change; including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	Measure two metric lengths, write an addition problem, and find the sum (sums 2 to 12 centimeters).	SMMA_LO_00756

Arkansas Standards Codes	Arkansas Mathematics Curriculum Framework 2016 Grade 4	SuccessMaker Item Description	Item ID
		Solve a problem in context that involves adding three amounts expressed as dollars and cents.	SMMA_LO_01608
		Make a picture to solve a multiplication problem involving total cost (2 to 5 items, 5, 10, or 15 cents each).	SMMA_LO_01584
		Calculate, compare, and use units rates to find the best prices for bakery ingredients.	SMMA_LO_02510
		Solve time and distance problems (whole numbers).	SMMA_LO_00842
		Find the unit price of an item (products 2 x 6 to 25 x 32).	SMMA_LO_00830
		Determine the number of dollar bills needed to buy three to five items).	SMMA_LO_01623
		Find a percent of a money amount (\$0.80 to \$10.80).	SMMA_LO_00270
		Estimate the difference by rounding to the nearest dollar (minuends \$5.00 to \$20.00, subtrahends \$3.00 to \$15.00).	SMMA_LO_01669
		Solve a problem by identifying the time 1 to 2 hours after a given time (not crossing 12 o'clock).	SMMA_LO_01547
		Solve a division problem about money with extra information (round quotient to the nearest whole number).	SMMA_LO_01585

Arkansas Standards Codes	Arkansas Mathematics Curriculum Framework 2016 Grade 4	SuccessMaker Item Description	Item ID
		Add metric Measurements with unlike units and express the sum in terms of the smaller unit.	SMMA_LO_00168
		Estimate the total cost of four items by rounding to the nearest dollar (sums to \$15.00).	SMMA_LO_01591
		Read weights from a chart; choose two weights that equal a given total (sums to 1,500).	SMMA_LO_01301
		Identify a correct expression to solve a problem about sales tax.	SMMA_LO_00845
		Add and compare decimals to hundredths to decide whether customers will save money	SMMA_LO_02506
		Find total earnings for two to four weeks given the weekly salary, commission percentage, and total sales (whole number percents).	SMMA_LO_01637
		Find the number of grams that represents a percentage of the total weight (whole numbers).	SMMA_LO_01636
		Identify the most reasonable answer to a division problem involving money.	SMMA_LO_01279
		Find the total cost, given an amount and the sales tax percentage.	SMMA_LO_00178

Arkansas Standards Codes	Arkansas Mathematics Curriculum Framework 2016 Grade 4	SuccessMaker Item Description	Item ID
		Estimate the sum or difference in a money problem by rounding to the nearest 10 (two-digit sums and differences).	SMMA_LO_01580
		Multiply with fractions to calculate the weight in campers' backpacks.	SMMA_LO_02507
		Solve an addition problem by finding the total cost of two items (prices expressed as decimals, total < \$0.50, no regrouping).	SMMA_LO_00181
		Determine the sale price of an item when the price is reduced by one-half, one-third, or one-fourth.	SMMA_LO_01285
		Identify the most reasonable answer to a multiplication problem involving money.	SMMA_LO_01278
		Convert linear Measurements to the same unit in order to fill orders for solar panels.	SMMA_LO_02505
		Subtract metric length or weight Measurements expressed as decimals (to tenths, difference 1.2 to 8.9, regrouping).	SMMA_LO_00159
		Find the number of dollar bills needed to buy two to four items (each \$1.79 to \$3.99 each).	SMMA_LO_01629
		Given the ending time and the elapsed time, find the starting time.	SMMA_LO_01613

Arkansas Standards Codes	Arkansas Mathematics Curriculum Framework 2016 Grade 4	SuccessMaker Item Description	Item ID
		Add metric Measurements with unlike units and express the sum in terms of the larger unit.	SMMA_LO_00172
AR.Math.Content.MD.A.2b	Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. Note: This is a standard that may be addressed throughout the year focusing on different context.	Multiply with fractions to calculate the weight in campers' backpacks.	SMMA_LO_02507
AR.Math.Content.4.MD.A.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.	Given a perimeter, mark equilateral polygons with the same side measures.	SMMA_LO_00849
		Given the length of one side of a rectangle, measure another side, and then find the perimeter.	SMMA_LO_00788
		Find the area of a rectangle using a formula.	SMMA_LO_00810
		Tile a rectangle to find its area; represent the area of the rectangle in two different ways (length times width and the sum of the areas of two smaller rectangles).	SMMA_LO_02031
		Multiplication and Division Targeted Lesson 26: Solving Area Word Problems	
		Multiplication and Division Targeted Lesson 28: Area and Perimeter Word Problems	
		Multiplication and Division Targeted Lesson 23: Counting and Calculating the Area of Rectangles	

Arkansas Standards Codes	Arkansas Mathematics Curriculum Framework 2016 Grade 4	SuccessMaker Item Description	Item ID
		Multiply side lengths to find the area of a rectangle in a real-world context; use area to represent a whole-number product by arranging tiles in a rectangle.	SMMA_LO_02030
		Find the perimeter of a figure (3 to 10 nonstandard units).	SMMA_LO_00757
		Find the perimeter of a polygon (decimal numbers, metric units).	SMMA_LO_00790
		Find the perimeter of a rectangle (24 to 48 customary or metric units).	SMMA_LO_00169
		Find the perimeter of a polygon (decimal numbers, metric units).	SMMA_LO_00805
		Find the area of a rectangle (36 to 144 customary or metric square units).	SMMA_LO_00173
		Multiplication and Division Targeted Lesson 24: Matching Areas of Rectangles	
		Find the area of a rectangle (5 to 25 square centimeters).	SMMA_LO_00773
		Find the area of a rectangle by tiling it; complete an equation to show that the area is the same as would be found by multiplying the side lengths.	SMMA_LO_02029
		Given the lengths of all sides, find the perimeter of a rectangle.	SMMA_LO_00821

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AR.Math.Content.MD.B	Represent and interpret data.		
AR.Math.Content.MD.B.4a	Make a line plot to display a data set of measurements in fractions of a unit (e.g., $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$).	Read and interpret a line plot.	SMMA_LO_01764
		Make a line plot to show measurement data in fractions of a unit.	SMMA_LO_02196
		Solve problems using fractional units of measurement data displayed in line plots.	SMMA_LO_02198
		Make a line plot to show measurement data in whole number units.	SMMA_LO_02158
		Choose a title for a line plot and label the units.	SMMA_LO_01643
		Analyze a line plot to find the total number of items that fall at, above, or below a given value.	SMMA_LO_01156
		Identify the most frequent value (mode) using a line plot.	SMMA_LO_01164
AR.Math.Content.MD.B.4b	Solve problems involving addition and subtraction of fractions by using information presented in line plots.	Fractions and Decimals Targeted Lesson 25: Fraction Operations Word Problems	
		Solve problems using fractional units of measurement data displayed in line plots.	SMMA_LO_02198
		Solve one-step equations (addition and subtraction, fractions).	SMMA_LO_01796

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AR.Math.Content.MD.C	Geometric measurement: understand concepts of angle and measure angles.		
AR.Math.Content.4.MD.C.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:		
AR.Math.Content.4.MD.C.5.a	An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle.	Determine the angle measure for a part of a circle.	SMMA_LO_02164
		Determine the total one-degree angle measures of an angle.	SMMA_LO_02165
AR.Math.Content.4.MD.C.5.b	An angle that turns through $\frac{1}{360}$ of a circle is called a 'one-degree angle,' and can be used to measure angles.	Determine the angle measure for a part of a circle.	SMMA_LO_02164
		Determine the total one-degree angle measures of an angle.	SMMA_LO_02165
AR.Math.Content.4.MD.C.5.c	An angle that turns through n one-degree angles is said to have an angle measure of n degrees.	Determine the total one-degree angle measures of an angle.	SMMA_LO_02165
AR.Math.Content.4.MD.C.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	Measure an angle using the appropriate protractor.	SMMA_LO_00646
		Select the appropriate protractor to measure an angle.	SMMA_LO_00644
		Use a protractor to measure an angle.	SMMA_LO_00636
		Use a protractor to measure an angle in a triangle or quadrilateral; then find the sum of all the angles in the figure.	SMMA_LO_00650

Arkansas Standards Codes	Arkansas Mathematics Curriculum Framework 2016 Grade 4	SuccessMaker Item Description	Item ID
		Determine the total one-degree angle measures of an angle.	SMMA_LO_02165
		Use a protractor to measure an angle.	SMMA_LO_00631
AR.Math.Content.MD.C.7b	Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems.	Solve a problem involving equal angle measures.	SMMA_LO_00677
		Find the measure of the missing angle in a diagram.	SMMA_LO_00674
AR.Math.Content.G	Geometry		
AR.Math.Content.G.A	Draw and identify lines and angles, and classify shapes by properties of their lines and angles.		
AR.Math.Content.G.A.1a	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.	Draw parallel, perpendicular, or intersecting lines on a grid.	SMMA_LO_00638
		Draw a line segment using a ruler (to 1/4 inch and 0.5 cm).	SMMA_LO_00800
AR.Math.Content.G.A.1b	Identify these in two-dimensional figures.	Determine whether points are outside, inside, or on a geometric figure.	SMMA_LO_00552
		Identify parallel and perpendicular streets on a map.	SMMA_LO_00619
		Identify the pairs of parallel line segments in a geometric drawing.	SMMA_LO_00639
		Identify right, acute, and obtuse angles in polygons.	SMMA_LO_00630
AR.Math.Content.G.A.2a	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size.	Classify geometric figures by a shape attribute.	SMMA_LO_00576
		Classify and sort three-dimensional	SMMA_LO_02138

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		solids based on attributes using formal geometric language.	
		Classify and sort 2D geometric figures by properties and attributes.	SMMA_LO_01728
		Identify the figure that is not of a given type (rectangle or triangle).	SMMA_LO_00571
		Identify the quadrilaterals in a set of figures.	SMMA_LO_00615
		Identify right, acute, and obtuse angles in polygons.	SMMA_LO_00630
AR.Math.Content.G.A.3a	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts.	Identify the shape with a given number of lines of symmetry.	SMMA_LO_01773
		Identify the horizontal line of symmetry.	SMMA_LO_00597
		Identify the lines of symmetry in an object.	SMMA_LO_01699
		Identify the vertical line of symmetry.	SMMA_LO_00595
		Identify lines that are lines of symmetry.	SMMA_LO_00623
AR.Math.Content.G.A.3b	Identify line-symmetric figures and draw lines of symmetry.	Draw a vertical or horizontal line of symmetry.	SMMA_LO_00608