



# SuccessMaker®

**Colorado Academic Standards  
Mathematics 2020  
Grade 4**

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

Colorado Academic Standards' Code	Colorado Academic Standards Mathematics 2020 Grade 4	SuccessMaker Item Descriptions	Item IDs
1	Number and Quantity		
4.NBT.A	Number & Operations in Base Ten: Generalize place value understanding for multi-digit whole numbers.		
4.NBT.A.1	Explain that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.	Identify the value of a given digit in a four-digit number.	SMMA_LO_01062
		Identify a number with a given digit in the ones, tens, hundreds, or thousands place.	SMMA_LO_01033
		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 Up to Six Digits	
4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.	Identify the expanded notation of a four-digit number.	SMMA_LO_01038
		Compare numbers (1,000 to 9,999).	SMMA_LO_01039
		Order four numbers from least to greatest (1,000 to 9,999).	SMMA_LO_01040
		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 word name for a four, five- or six-digit numbers.	SMMA_LO_01043
		Identify a number with a given digit in the ones to hundred thousands place.	SMMA_LO_01045
		Identify the expanded notation of a five- or six-digit number.	SMMA_LO_01046

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		Find a number equal to 1 to 9 thousands, 0 to 9 hundreds, 0 to 9 tens, and 0 to 9 ones.	SMMA_LO_01051
		Identify a number with a given digit in the thousands to hundred millions place.	SMMA_LO_01064
		Enter the number for a word name (1000 to 9999).	SMMA_LO_01065
		Enter a number in a place-value chart (10,000 to 999,999).	SMMA_LO_01070
		Identify a number that is one or two greater than or less than a five- or six-digit number.	SMMA_LO_01072
		Enter each individual digit in a place-value chart for a five- to nine-digit number given the name of the number.	SMMA_LO_01075
		Identify the number when given the word name (10,000 to 999,999).	SMMA_LO_01076
		Identify the digits in the period (hundreds, thousands, millions, and billions).	SMMA_LO_01083
		Express a number in expanded notation or determine the number from an expanded notation.	SMMA_LO_01097
		Order five numbers from least to greatest (three- to six-digit numbers).	SMMA_LO_01710
		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	
4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.	Estimate the sum by rounding to the nearest hundred (three-digit addends).	SMMA_LO_01621
		Round a three- to five-digit number to the nearest hundred.	SMMA_LO_01081
		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	

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4.NBT.B	Number & Operations in Base Ten: Use place value understanding and properties of operations to perform multi-digit arithmetic.		
4.NBT.B.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.	Add two addends (student choice, three-digit addends, sums 1000 to 1899, regrouping hundreds).	SMMA_LO_00077
		Add two addends (student choice, three-digit addends, sums 1010 to 1898, regrouping).	SMMA_LO_00091
		Add two addends (student choice, three-digit addends, sums 1000 to 1989, regrouping).	SMMA_LO_00093
		Add two addends (student choice, three-digit addends, sums 1000 to 1998, regrouping in all places).	SMMA_LO_00096
		Add three addends (student choice, a two-digit and 2 three-digit addends, sums 211 to 2097, regrouping in all places).	SMMA_LO_00097
		Add three addends (student choice, three-digit addends, sums 311 to 2997, regrouping in all places).	SMMA_LO_00098
		Add two addends (student choice, a three-digit and a four-digit addends, sums 1111 to 10998, regrouping in all places).	SMMA_LO_00099
		Add two addends (student choice, four-digit addends, sums 2111 to 19998, regrouping in all places).	SMMA_LO_00100
		Use logical reasoning to complete an addition puzzle with two three-digit addends.	SMMA_LO_01261
		Subtract a three-digit number from a four-digit number (regrouping from the tens place).	SMMA_LO_01493
		Subtract a three-digit number from a four-digit number (regrouping from the tens and thousands places).	SMMA_LO_01494

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		Subtract a three-digit number from a four-digit number (regrouping from the tens and thousands places).	SMMA_LO_01495
		Subtract a three-digit number from a four-digit number (regrouping from the tens and hundreds places).	SMMA_LO_01496
		Subtract a three-digit number from a four-digit number (regrouping from the tens and hundreds places).	SMMA_LO_01497
		Find the difference of two whole numbers (student choice, four-digit numbers, regrouping from tens and hundreds places).	SMMA_LO_01498
		Subtract a three-digit number from a four-digit number (student choice, regrouping from tens, hundreds, and thousands places).	SMMA_LO_01499
		Subtract a three-digit number from a four-digit number (student choice, regrouping from tens, hundreds, and thousands places).	SMMA_LO_01500
		Find the difference of two whole numbers (student choice, four-digit numbers, regrouping from tens and thousands places).	SMMA_LO_01501
		Subtract across zero (student choice, four-digit minuends with a 0 in the tens place, regrouping from the tens, hundreds, and thousands places).	SMMA_LO_01502
		Subtract across zero (student choice, four-digit minuends with a 0 in the tens place, regrouping from the tens, hundreds, and thousands places).	SMMA_LO_01503
		Find the difference of two whole numbers (student choice, four-digit numbers, regrouping from tens, hundreds, and thousands places).	SMMA_LO_01504

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4.NBT.B.5	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. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	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 two-digit number by a one-digit number (student choice, products 10 x 2 to 15 x 5).	SMMA_LO_00870
		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 16 x 2 to 19 x 5).	SMMA_LO_00872
		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 one-digit number by a two-digit number (products 2 x 12 to 9 x 12).	SMMA_LO_00875
		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 two-digit number by a one-digit number (student choice, products 21 x 2 to 99 x 9).	SMMA_LO_00880
		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
		Represent the product of 2 two-digit numbers using arrays, area models, or equations.	SMMA_LO_00884
		Multiply whole numbers (student choice, products 101 x 2 to 999 x 9).	SMMA_LO_00886
		Multiply whole numbers (products 20 x 20 to 90 x 90, multiples of 10).	SMMA_LO_00889

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		Multiply a four-digit number by a one-digit number (student choice, products 1000 x 2 to 9999 x 9).	SMMA_LO_00892
		Find the missing factor (products 20 x 20 to 90 x 90, multiples of 10).	SMMA_LO_00893
		Multiply a 1-digit number by a 2-digit number (products 13 x 1 to 19 x 5).	SMMA_LO_00894
		Multiply a 1-digit number by a 2-digit number (products 12 x 6 to 19 x 9).	SMMA_LO_00896
		Multiply whole numbers (student choice, products 11 x 11 to 15 x 99).	SMMA_LO_00899
		Multiply a two-digit number by a two-digit number (student choice, products 16 x 11 to 19 x 99).	SMMA_LO_00901
		Multiply whole numbers (student choice, products 21 x 11 to 99 x 99).	SMMA_LO_00903
		Multiply whole numbers (student choice, products 101 x 20 to 999 x 90, multiples of 10).	SMMA_LO_00904
		Identify equivalent arrays with different factors (two-digit factors).	SMMA_LO_01733
		Use an area model to solve a multiplication problem (two-digit factors).	SMMA_LO_01734
		Multiplication and Division Targeted Lesson 32: Multiplying by Two-Digit Numbers	
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 using the long division algorithm (one-digit divisor, no remainder).	SMMA_LO_00290
		Divide using the long division algorithm (one-digit divisor, remainder).	SMMA_LO_00292

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		Divide using the long division algorithm (one-digit divisor, no remainder).	SMMA_LO_00294
		Divide using the long division algorithm (one-digit divisor, remainder).	SMMA_LO_00295
		Divide using the long division algorithm (three-digit dividend, one-digit divisor, no remainder).	SMMA_LO_00296
		Divide using the long division algorithm (three-digit dividend, one-digit divisor, remainder).	SMMA_LO_00297
		Divide using the long division algorithm (three-digit dividend, one-digit divisor, remainder).	SMMA_LO_00298
		Represent a quotient by using arrays, area models, or equations.	SMMA_LO_00300
		Find the quotient of b divided by a (combinations 6 x 13 to 9 x 19).	SMMA_LO_00312
		Multiplication and Division Targeted Lesson 33: Relating Division to Multiplication	
4.NF.A	Number & Operations-Fractions: Extend understanding of fraction equivalence and ordering.		
4.NF.A.1	Explain why a fraction $a/b$ is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	Find the missing numerator or denominator in an equivalent fraction (simplified fractions $1/2$ to $3/4$ ).	SMMA_LO_00451
		Find the missing numerator or denominator in an equivalent fraction (simplified fractions $1/2$ to $7/8$ ).	SMMA_LO_00453
		Using models, find equivalent fractions (halves to twelfths).	SMMA_LO_00433
		Identify two equivalent fractions for $1/2$ .	SMMA_LO_01708
		Determine if a fraction can be simplified; simplify if possible (simplified fractions $1/2$ to $7/8$ ).	SMMA_LO_00454
		Write a fraction in simplest form (simplified fractions $1/2$ to $7/8$ ).	SMMA_LO_00455

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		Determine if a fraction can be simplified; simplify if possible (simplified fractions 1/2 to 7/8).	SMMA_LO_00456
		Find an equivalent fraction of a simplified fraction (simplified fractions 1/2 to 8/9).	SMMA_LO_00457
		Find three equivalent fractions (simplified fractions 1/2 to 8/9).	SMMA_LO_00458
		Identify the figures with the equivalent fractional parts shaded.	SMMA_LO_00483
		Generate a table of equivalent fractions for a fraction in simplest form.	SMMA_LO_01791
		Generate a table of equivalent fractions for a fraction not in simplest form.	SMMA_LO_01792
		Identify the fraction equivalent to the given fraction.	SMMA_LO_01793
		Fractions and Decimals Targeted Lesson 6: Equivalent Fraction Area Models	
		Fractions and Decimals Targeted Lesson 7: Equivalent Fraction Set Models	
4.NF.A.2	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 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using a visual fraction model.	Use a model to compare two fractions (halves to eighths, unlike denominators).	SMMA_LO_00429
		Compare fractions to 1 on the number line (halves to eighths).	SMMA_LO_00432
		Using models, compare fractions (unlike denominators, halves to sixteenths).	SMMA_LO_00436
		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

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		Order three fractions from least to greatest (unlike denominators, halves to twelfths).	SMMA_LO_00440
		Compare fractions to 1 (halves to sixteenths).	SMMA_LO_00448
		Compare fractions (unlike denominators).	SMMA_LO_00462
		Identify the greatest or least fraction in a problem (unlike denominators).	SMMA_LO_00482
		Determine the equivalent fractions using the least common denominator of two given fractions.	SMMA_LO_00494
		Compare fractions (unlike denominators, to ninths).	SMMA_LO_00495
		Identify a list of fractions that is ordered from least to greatest (to sixths).	SMMA_LO_00497
		Identify the fraction that is between two fractions.	SMMA_LO_00503
4.NF.B	Number & Operations-Fractions: Build fractions from unit fractions.		
4.NF.B.3	Understand a fraction $a/b$ with $a > 1$ as a sum of fractions $1/b$ .		
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
4.NF.B.3.b	Decompose a fraction into a sum of fractions with like denominators in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: $3/8 = 1/8 + 1/8 + 1/8$ ; $3/8 = 1/8 + 2/8$ ; $2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$ .	Using models, add fractions, no simplifying (like denominators, thirds to eighths).	SMMA_LO_00441
		Using models, subtract fractions, no simplifying (like denominators, halves to eighths).	SMMA_LO_00442
		Identify the difference when a fraction is subtracted from 1 (fourths to twelfths).	SMMA_LO_00445
		Add fractions with like denominators (no simplifying).	SMMA_LO_01709

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		Determine addition expressions that are equivalent to a given fraction.	SMMA_LO_02146
4.NF.B.3.c	Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	Add mixed numbers; no simplifying (like denominators, thirds to twelfths).	SMMA_LO_00460
		Subtract mixed numbers; no simplifying (like denominators, thirds to twelfths).	SMMA_LO_00461
		Add mixed numbers; simplify if necessary (like denominators, halves to sixteenths).	SMMA_LO_00463
		Add mixed numbers within a context; simplify if necessary (like denominators).	SMMA_LO_00480
		Subtract mixed numbers in context; simplify if necessary (like denominators).	SMMA_LO_00481
		Subtract mixed numbers; simplify if necessary (like denominators).	SMMA_LO_00485
		Add mixed numbers with like denominators in context; simplify if necessary.	SMMA_LO_01624
		Add mixed numbers; simplify if necessary (like denominators).	SMMA_LO_00484
		Fractions and Decimals Targeted Lesson 18: Adding Mixed Numbers with Like Denominators	
		Fractions and Decimals Targeted Lesson 19: Subtracting Mixed Numbers with Like Denominators	
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.	Add mixed numbers within a context; simplify if necessary (like denominators).	SMMA_LO_00480
		Subtract mixed numbers in context; simplify if necessary (like denominators).	SMMA_LO_00481

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		Add mixed numbers with like denominators in context; simplify if necessary.	SMMA_LO_01624
		Use a model and an equation to solve word problems involving the addition of fractions with like denominators.	SMMA_LO_02004
		Use a model and an equation to solve word problems involving the subtraction of fractions with like denominators.	SMMA_LO_02016
		Using models, subtract fractions, no simplifying (like denominators, halves to eighths).	SMMA_LO_00442
		Fractions and Decimals Targeted Lesson 25: Fraction Operations Word Problems	
4.NF.B.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.		
4.NF.B.4.a	Understand a fraction $a/b$ as a multiple of $1/b$ . For example, use a visual fraction model to represent $5/4$ as the product $5 \times 1/4$ , recording the conclusion by the equation $5/4 = 5 \times 1/4$ .	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
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. For example, 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

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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. For example, if each person at a party will eat $\frac{3}{8}$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?	Determine the sale price of an item when the price is reduced by one-half, one-third, or one-fourth.	SMMA_LO_01285
		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
		Using pictures, find a fractional amount of a whole number (product of halves to fourths and 2 to 16).	SMMA_LO_00428
		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
		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
		Fractions and Decimals Targeted Lesson 21: Multiplying Fractions by Whole Numbers	

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4.NF.C	Number & Operations-Fractions: Use decimal notation for fractions, and compare decimal fractions.		
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. (Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.) For example, express $\frac{3}{10}$ as $\frac{30}{100}$ , and add $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$ .	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
4.NF.C.6	Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as $\frac{62}{100}$ ; describe a length as 0.62 meters; locate 0.62 on a number line diagram.	Match a fraction to a decimal (tenths, 0.1 to 0.9).	SMMA_LO_00184
		Determine the fraction and decimal that represent a model (base-ten blocks, tenths, 0.1 to 0.9).	SMMA_LO_00185
		Enter a decimal number for a mixed number (tenths, 1.1 to 9.9).	SMMA_LO_00187
		Find the missing decimal number on a number line (tenths, 0.1 to 0.9).	SMMA_LO_00188
		Enter the decimal equivalent for a mixed number (hundredths, 100 in denominator).	SMMA_LO_00205
		Determine the equivalent fraction for a decimal (the denominator is a factor of 100).	SMMA_LO_00259
		Fractions and Decimals Targeted Lesson 26: Representing Tenths and Hundredths	
		Fractions and Decimals Targeted Lesson 33: Decimal Sequences	

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4.NF.C.7	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using a visual model.	Compare decimal numbers (0.1 to 9.9).	SMMA_LO_00191
		Order three decimal numbers (tenths to hundredths).	SMMA_LO_00218
		Compare two decimal numbers (10.01 to 99.99).	SMMA_LO_00216
		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
		Fractions and Decimals Targeted Lesson 30: Comparing Decimals	
2	Algebra and Functions		
4.OA.A	Operations & Algebraic Thinking: Use the four operations with whole numbers to solve problems.		
4.OA.A.1	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. Represent verbal statements of multiplicative comparisons as multiplication equations.	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
		Interpret a multiplication equation by writing a comparison statement.	SMMA_LO_02025
		Multiplication and Division Targeted Lesson 1: Multiplication as Equal Groups	
		Multiplication and Division Targeted Lesson 2: Equal Groups in Context	

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		Multiplication and Division Targeted Lesson 5: Comparison Situations	
		Multiplication and Division Targeted Lesson 6: Writing Comparison Situations	
4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	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
		Make a picture to solve a multiplication problem involving total cost (2 to 5 items, 5, 10, or 15 cents each).	SMMA_LO_01584
		Make a picture to solve a quotitive division problem (dividends to 20).	SMMA_LO_01565
		Use a picture to solve an addition problem with three addends.	SMMA_LO_01286
4.OA.A.3	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. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	Measure topsoil in a soil sample; calculate how long it took to form.	SMMA_LO_01323
		Make a picture to solve a multistep addition and multiplication problem in context.	SMMA_LO_01592
		Addition and Subtraction Targeted Lesson 13: Introducing Two-Step Word Problems	

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4.OA.B	Operations & Algebraic Thinking: Gain familiarity with factors and multiples.		
4.OA.B.4	Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.	Identify the number that is divisible by a given factor (numbers 2 to 81, factors 2 to 9).	SMMA_LO_01066
		Identify numbers that are multiples of a given number.	SMMA_LO_01069
		Identify the complete set of factors for a number (2 to 25).	SMMA_LO_01071
		Find the factors of a number and determine if the number is prime or composite (3 to 30).	SMMA_LO_01073
		Identify prime and composite numbers (one- or two-digit).	SMMA_LO_01105
		Determine three factors of a given number.	SMMA_LO_01107
		Identify sets of prime and composite numbers.	SMMA_LO_01119
4.OA.C	Operations & Algebraic Thinking: Generate and analyze patterns.		
4.OA.C.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.	Determine the output of one-function machine, given an input and sample inputs and outputs (combinations 2 x 2 to 9 x 9).	SMMA_LO_00358
		Look for a pattern to solve a problem.	SMMA_LO_01276
		Extend a geometric pattern.	SMMA_LO_01691
		Find the missing decimal number in a pattern (addition).	SMMA_LO_00253
		Generate a table of values given a rule.	SMMA_LO_01724
		Ratios and Equations Targeted Lesson 30: What's My Rule?	

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3	Data, Statistics, and Probability		
4.MD.A	Measurement & Data: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.		
4.MD.A.1	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...	Compare unlike customary units of length (inches, feet, and yards).	SMMA_LO_00792
		Identify the reasonable customary capacity of an object (cups, pints, quarts, and gallons).	SMMA_LO_00794
		Compare unlike customary units of capacity (cups, pints, quarts, and gallons).	SMMA_LO_00799
		Identify the reasonable length, width, or height of an object (millimeters, centimeters, and meters).	SMMA_LO_00803
		Identify the reasonable mass for an object (grams, kilograms, and milligrams).	SMMA_LO_00807
		Identify the reasonable capacity of an object (milliliters and liters).	SMMA_LO_00811
		Compare unlike metric units and identify the correct statement (mm, cm, m, km; mL, L; mg, g, kg).	SMMA_LO_00820
		Convert hours to minutes.	SMMA_LO_01672
		Identify distances or objects that would be measured in cm, m, or km.	SMMA_LO_01703
		Convert Measurement units either by making a table or by multiplying by a unit rate.	SMMA_LO_02117

Colorado Academic Standards' Code	Colorado Academic Standards Mathematics 2020 Grade 4	SuccessMaker Item Descriptions	Item IDs
		Express yards and feet as an equivalent number of feet, or feet and inches as an equivalent number of inches.	SMMA_LO_00166
		Choose the appropriate unit of capacity (ounce, cup, pint, quart, and gallon).	SMMA_LO_01864
4.MD.A.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	Find the perimeter of a polygon (decimal numbers, metric units).	SMMA_LO_00805
		Find a fraction of an hour in minutes ( $\frac{1}{4}$ , $\frac{1}{3}$ , $\frac{1}{2}$ , $\frac{2}{3}$ , or $\frac{3}{4}$ hour).	SMMA_LO_00817
		Convert units of time (seconds, minutes, hours, days, weeks, months, and years).	SMMA_LO_00837
		Identify the most reasonable answer to a division problem involving money.	SMMA_LO_01279
		Solve a division problem about money with extra information (round quotient to the nearest whole number).	SMMA_LO_01585
		Find the change from one dollar (item costs 55 to 99 cents).	SMMA_LO_01598
		Solve a decimal subtraction problem in context (tenths, regrouping).	SMMA_LO_01599
		Solve a problem in context that involves adding three amounts expressed as dollars and cents.	SMMA_LO_01608
		Find the change from one dollar for two to four items (each 10, 15, or 20 cents).	SMMA_LO_01609
		Given the ending time and the elapsed time, find the starting time.	SMMA_LO_01613
		Determine the number of dollar bills needed to buy three to five items).	SMMA_LO_01623

Colorado Academic Standards' Code	Colorado Academic Standards Mathematics 2020 Grade 4	SuccessMaker Item Descriptions	Item IDs
		Estimate the difference by rounding to the nearest dollar (minuends \$5.00 to \$20.00, subtrahends \$3.00 to \$15.00).	SMMA_LO_01669
		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
		Fractions and Decimals Targeted Lesson 25: Fraction Operations Word Problems	
4.MD.A.3	Apply the area and perimeter formulas for rectangles in real-world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.	Find the area of a rectangle using a formula.	SMMA_LO_00810
		Given the length of one side of a rectangle, measure another side, and then find the perimeter.	SMMA_LO_00788
		Find the perimeter of a rectangle (24 to 48 customary or metric units).	SMMA_LO_00169
		Given the lengths of all sides, find the perimeter of a rectangle.	SMMA_LO_00821
		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 area of a rectangle (5 to 25 square centimeters).	SMMA_LO_00773
		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
		Find the area of a rectangle (36 to 144 customary or metric square units).	SMMA_LO_00173

Colorado Academic Standards' Code	Colorado Academic Standards Mathematics 2020 Grade 4	SuccessMaker Item Descriptions	Item IDs
		Multiplication and Division Targeted Lesson 26: Solving Area Word Problems	
		Multiplication and Division Targeted Lesson 28: Area and Perimeter Word Problems	
4.MD.B	Measurement & Data: Represent and interpret data.		
4.MD.B.4	Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots.	Make a line plot to show measurement data in whole number units.	SMMA_LO_02158
		Solve problems using fractional units of measurement data displayed in line plots.	SMMA_LO_02198
4.MD.C	Measurement & Data: Geometric measurement: Understand concepts of angle and measure angles.		
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:		
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. 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
4.MD.C.5.B	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
4.MD.C.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	Use a protractor to measure an angle.	SMMA_LO_00631
		Use a protractor to measure an angle.	SMMA_LO_00636
		Measure an angle using the appropriate protractor.	SMMA_LO_00646

Colorado Academic Standards' Code	Colorado Academic Standards Mathematics 2020 Grade 4	SuccessMaker Item Descriptions	Item IDs
		Select the appropriate protractor to measure an angle.	SMMA_LO_00644
		Determine the total one-degree angle measures of an angle.	SMMA_LO_02165
		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
		Measure complementary or supplementary angles and find the sum of the angle measures.	SMMA_LO_00661
		Measure complementary or supplementary angles and find the sum of the angle measures.	SMMA_LO_00663
4.MD.C.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	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
		Find the measure of the missing angle in a diagram.	SMMA_LO_00674
		Solve a problem involving equal angle measures.	SMMA_LO_00677
4	Geometry		
4.G.A	Geometry: Draw and identify lines and angles, and classify shapes by properties of their lines and angles.		
4.G.A.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	Identify line segments in three- and four-sided figures.	SMMA_LO_00579
		Identify right, acute, and obtuse angles in polygons.	SMMA_LO_00630
		Determine whether points are outside, inside, or on a geometric figure.	SMMA_LO_00552
		Draw parallel, perpendicular, or intersecting lines on a grid.	SMMA_LO_00638

Colorado Academic Standards' Code	Colorado Academic Standards Mathematics 2020 Grade 4	SuccessMaker Item Descriptions	Item IDs
		Identify the pairs of parallel line segments in a geometric drawing.	SMMA_LO_00639
		Draw a line segment using a ruler (to 1/4 inch and 0.5 cm).	SMMA_LO_00800
4.G.A.2	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. Recognize right triangles as a category, and identify right triangles.	In a set of quadrilaterals, identify all the parallelograms.	SMMA_LO_00621
		Identify acute, obtuse, and right triangles.	SMMA_LO_00655
		Classify and sort 2D geometric figures by properties and attributes.	SMMA_LO_01728
		Identify all triangles of a particular class (acute, right, or obtuse).	SMMA_LO_01774
4.G.A.3	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 line-symmetric figures and draw lines of symmetry.	Identify the vertical line of symmetry.	SMMA_LO_00595
		Identify the horizontal line of symmetry.	SMMA_LO_00597
		Draw a vertical or horizontal line of symmetry.	SMMA_LO_00608
		Identify lines that are lines of symmetry.	SMMA_LO_00623
		Complete a symmetrical drawing.	SMMA_LO_00647
		Identify the lines of symmetry in an object.	SMMA_LO_01699
		Identify the shape with a given number of lines of symmetry.	SMMA_LO_01773