



# SuccessMaker<sup>®</sup>

Massachusetts Curriculum Framework  
for Mathematics 2017, Grade 4

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

Massachusetts Curriculum Framework for Mathematics 2017 Grade 4	Item Code	SuccessMaker Item Description
(4.OA.A) 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.	SMMA_LO_02008	Translate a verbal statement of a multiplicative comparison into a multiplication equation.
	SMMA_LO_02025	Interpret a multiplication equation by writing a comparison statement.
(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.	SMMA_LO_02009	Use a model to represents a word problem involving multiplicative comparison. Then, use an equation to represent the solution to the word problem.
(4.OA.A.3) Solve multi-step 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.	SMMA_LO_00246	Identify a reasonable answer for a division problem.
	SMMA_LO_01286	Use a picture to solve an addition problem with three addends.
	SMMA_LO_01312	Predict the effect of changing temperatures on the weather.
	SMMA_LO_01323	Measure topsoil in a soil sample; calculate how long it took to form.
	SMMA_LO_01573	Solve a division problem in context by rounding the quotient to the next whole number (model shown).
	SMMA_LO_01592	Make a picture to solve a multistep addition and multiplication problem in context.
	SMMA_LO_01595	Solve an addition problem using data in a table (sums 100 to 198).

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	SMMA_LO_01616	Solve a division problem in context (remainder).
	SMMA_LO_01617	Interpret the quotient and remainder of a division problem in context (three-digit dividends).
	SMMA_LO_01620	Identify the best estimate for a sum using data in a table (three- and four-digit addends).
	SMMA_LO_01663	Share a set of objects equally to show a division problem (6, 7, 10, or 12 objects).
	SMMA_LO_01675	Estimate the sum by rounding to the nearest hundred (three-digit addends).
	SMMA_LO_01289	Choose a method to solve a two-step problem.
	SMMA_LO_01311	Identify all the towns with temperatures below 32 degrees Fahrenheit on a weather map.
	SMMA_LO_01333	Determine the number of calories in multiple servings given data in a chart.
	SMMA_LO_01566	Identify the expression that gives the best estimate for an addition or subtraction problem in context (two-digit numbers).
	SMMA_LO_01580	Estimate the sum or difference in a money problem by rounding to the nearest 10 (two-digit sums and differences).
	SMMA_LO_01586	Identify the most reasonable quantity for a context (order of magnitude differs).
	SMMA_LO_01604	Solve a multiplication problem in context (one-, two-, and three-digit factors).
	SMMA_LO_01614	Estimate the difference of 2 four-digit numbers by rounding each to the nearest thousand.
	SMMA_LO_02503	Students use multi-digit operations to solve problems.

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(4.OA.B) 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.	SMMA_LO_01066	Identify the number that is divisible by a given factor (numbers 2 to 81, factors 2 to 9).
	SMMA_LO_01069	Identify numbers that are multiples of a given number.
	SMMA_LO_01071	Identify the complete set of factors for a number (2 to 25).
	SMMA_LO_01073	Find the factors of a number and determine if the number is prime or composite (3 to 30).
	SMMA_LO_01105	Identify prime and composite numbers (one- or two-digit).
	SMMA_LO_01107	Determine three factors of a given number.
	SMMA_LO_01119	Identify sets of prime and composite numbers.
	SMMA_LO_01093	Identify the prime factorization of a two-digit number.
	SMMA_LO_01101	Identify which numbers are divisible by another number (divisors 2 to 10).
(4.OA.C) 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.	SMMA_LO_00358	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_01276	Look for a pattern to solve a problem.
	SMMA_LO_01691	Extend a geometric pattern.
	SMMA_LO_00519	Extend a 1-2-1-2 pattern of pictures.
	SMMA_LO_00520	Extend a 1-2-1-2 pattern of geometric figures.
	SMMA_LO_00521	Extend a 1-1-2-2 pattern of pictures.
	SMMA_LO_00522	Extend a 1-1-2-2 pattern of geometric figures.
	SMMA_LO_00539	Match patterns of geometric figures.
	SMMA_LO_00556	Extend a 1-2-2 pattern of pictures.

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	SMMA_LO_00558	Extend a 1-1-2 or 1-2-2 pattern of congruent shapes.
	SMMA_LO_00560	Extend a 1-2-3 pattern of similar figures.
	SMMA_LO_00585	Extend a 1-2-3 pattern of geometric figures.
	SMMA_LO_00591	Identify the missing geometric figure in a 1-2-1-2 pattern.
	SMMA_LO_00607	Identify the missing picture in a 1-2-3-1-2-3 pattern.
	SMMA_LO_01050	Identify an even or odd number (2 to 99).
	SMMA_LO_01053	Identify the expression whose sum is odd or even (basic facts).
	SMMA_LO_01054	Identify odd or even numbers (two- and three-digit).
	SMMA_LO_01056	Count by 2's, 3's, or 10's (11 to 209, not multiples of 2, 3, 10).
	SMMA_LO_01058	Count by 5's, 6's, or 7's (through 70).
	SMMA_LO_01061	Count by 8's or 9's (up to 90).
	SMMA_LO_01653	Describe the relationship between two sets of numbers in a relation or function using multiplication, addition, or subtraction.
	SMMA_LO_01654	Describe the relationship between two sets of numbers in a relation or function using subtraction (minuends 30 to 50, subtrahends 2 to 5).
	SMMA_LO_01655	Describe the relationship between two sets of numbers in a relation or function using multiplication (factors 2 - 5).
(4.NBT) Number and Operations in Base Ten		
(4.NBT.A) Generalize place value understanding for multi-digit whole numbers less than or equal to 1,000,000.		
(4.NBT.A.1) Recognize that in a multi-digit whole number, a digit in any place represents 10 times as much as it represents in the place to its right.	SMMA_LO_01062	Identify the value of a given digit in a four-digit number.

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(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.	SMMA_LO_01038	Identify the expanded notation of a four-digit number.
	SMMA_LO_01039	Compare numbers (1,000 to 9,999).
	SMMA_LO_01040	Order four numbers from least to greatest (1,000 to 9,999).
	SMMA_LO_01043	Identify a word name for a four-, five- or six-digit numbers.
	SMMA_LO_01045	Identify a number with a given digit in the ones to hundred thousands place.
	SMMA_LO_01046	Identify the expanded notation of a five- or six-digit number.
	SMMA_LO_01051	Find a number equal to 1 to 9 thousands, 0 to 9 hundreds, 0 to 9 tens, and 0 to 9 ones.
	SMMA_LO_01064	Identify a number with a given digit in the thousands to hundred millions place.
	SMMA_LO_01065	Enter the number for a word name (1000 to 9999).
	SMMA_LO_01070	Enter a number in a place-value chart (10,000 to 999,999).
	SMMA_LO_01072	Identify a number that is one or two greater than or less than a five- or six-digit number.
	SMMA_LO_01075	Enter each individual digit in a place-value chart for a five- to nine-digit number given the name of the number.
	SMMA_LO_01076	Identify the number when given the word name (10,000 to 999,999).
	SMMA_LO_01083	Identify the digits in the period (hundreds, thousands, millions, and billions).
	SMMA_LO_01097	Express a number in expanded notation or determine the number from an expanded notation.
	SMMA_LO_01710	Order five numbers from least to greatest (three- to six-digit numbers).
	SMMA_LO_01711	Compare two whole numbers (three to seven-digit numbers).

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	SMMA_LO_01032	Show a four-digit number with base-ten blocks.
(4.NBT.A.3) Use place value understanding to round multi-digit whole numbers to any place.	SMMA_LO_01106	Round four- five- and six-digit numbers to a given place
	SMMA_LO_01621	Estimate the sum by rounding to the nearest hundred (three-digit addends).
	SMMA_LO_01005	Identify the multiple of 5 that is closest to a given number.
	SMMA_LO_01006	Identify the multiple of 5 that is closer to a number (25 to 94).
(4.NBT.B) Use place value understanding and properties of operations to perform multi-digit arithmetic on whole numbers less than or equal to 1,000,000.		
(4.NBT.B.4) Fluently add and subtract multi-digit whole numbers using the standard algorithm.	SMMA_LO_00077	Add two addends (student choice, three-digit addends, sums 1000 to 1899, regrouping hundreds).
	SMMA_LO_00091	Add two addends (student choice, three-digit addends, sums 1010 to 1898, regrouping).
	SMMA_LO_00093	Add two addends (student choice, three-digit addends, sums 1000 to 1989, regrouping).
	SMMA_LO_00096	Add two addends (student choice, three-digit addends, sums 1000 to 1998, regrouping in all places).
	SMMA_LO_00097	Add three addends (student choice, a two-digit and 2 three-digit addends, sums 211 to 2097, regrouping in all places).
	SMMA_LO_00098	Add three addends (student choice, three-digit addends, sums 311 to 2997, regrouping in all places).
	SMMA_LO_00099	Add two addends (student choice, a three-digit and a four-digit addends, sums 1111 to 10998, regrouping in all places).
	SMMA_LO_00100	Add two addends (student choice, four-digit addends, sums 2111 to 19998, regrouping in all places).

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	SMMA_LO_01261	Use logical reasoning to complete an addition puzzle with two three-digit addends.
	SMMA_LO_01493	Subtract a three-digit number from a four-digit number (regrouping from the tens place).
	SMMA_LO_01494	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 thousands places).
	SMMA_LO_01496	Subtract a three-digit number from a four-digit number (regrouping from the tens and hundreds places).
	SMMA_LO_01497	Subtract a three-digit number from a four-digit number (regrouping from the tens and hundreds places).
	SMMA_LO_01498	Find the difference of two whole numbers (student choice, four-digit numbers, regrouping from tens and hundreds 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	Subtract a three-digit number from a four-digit number (student choice, regrouping from tens, hundreds, and thousands places).
	SMMA_LO_01501	Find the difference of two whole numbers (student choice, four-digit numbers, regrouping from tens 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	Subtract across zero (student choice, four-digit minuends with a 0 in the tens place, regrouping from the tens, hundreds, and thousands places).

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	SMMA_LO_01504	Find the difference of two whole numbers (student choice, four-digit numbers, regrouping from tens, hundreds, and thousands places).
(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.	SMMA_LO_00869	Multiply a two-digit number by a one-digit number (student choice, vertical, products $10 \times 1$ to $12 \times 4$ ).
	SMMA_LO_00870	Multiply a two-digit number by a one-digit number (student choice, products $10 \times 2$ to $15 \times 5$ ).
	SMMA_LO_00871	Multiply a two-digit number by a one-digit number (products $10 \times 2$ to $12 \times 12$ ).
	SMMA_LO_00872	Multiply a two-digit number by a one-digit number (student choice, products $16 \times 2$ to $19 \times 5$ ).
	SMMA_LO_00874	Multiply a two-digit number by a one-digit number (student choice, products $10 \times 6$ to $15 \times 9$ ).
	SMMA_LO_00875	Multiply a one-digit number by a two-digit number (products $2 \times 12$ to $9 \times 12$ ).
	SMMA_LO_00876	Multiply a two-digit number by a one-digit number (student choice, products $16 \times 6$ to $19 \times 9$ ).
	SMMA_LO_00880	Multiply a two-digit number by a one-digit number (student choice, products $21 \times 2$ to $99 \times 9$ ).
	SMMA_LO_00882	Multiply a three-digit number by a one-digit number (student choice, products $100 \times 2$ to $990 \times 9$ , multiples of 10).
	SMMA_LO_00884	Represent the product of 2 two-digit numbers using arrays, area models, or equations.
	SMMA_LO_00886	Multiply whole numbers (student choice, products $101 \times 2$ to $999 \times 9$ ).
	SMMA_LO_00889	Multiply whole numbers (products $20 \times 20$ to $90 \times 90$ , multiples of 10).

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	SMMA_LO_00892	Multiply a four-digit number by a one-digit number (student choice, products 1000 x 2 to 9999 x 9).
	SMMA_LO_00893	Find the missing factor (products 20 x 20 to 90 x 90, multiples of 10).
	SMMA_LO_00894	Multiply a 1-digit number by a 2-digit number (products 13 x 1 to 19 x 5).
	SMMA_LO_00896	Multiply a 1-digit number by a 2-digit number (products 12 x 6 to 19 x 9).
	SMMA_LO_00899	Multiply whole numbers (student choice, products 11 x 11 to 15 x 99).
	SMMA_LO_00901	Multiply a two-digit number by a two-digit number (student choice, products 16 x 11 to 19 x 99).
	SMMA_LO_01603	Estimate the product by rounding the second factor. (two-digit number to the nearest 10)
	SMMA_LO_01733	Identify equivalent arrays with different factors (two-digit factors).
	SMMA_LO_01734	Use an area model to solve a multiplication problem (two-digit factors).
	SMMA_LO_02192	Determine products of a number and 10 or 100.

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(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.	SMMA_LO_00290	Divide using the long division algorithm (one-digit divisor, no remainder).
	SMMA_LO_00292	Divide using the long division algorithm (one-digit divisor, remainder).
	SMMA_LO_00294	Divide using the long division algorithm (one-digit divisor, no remainder).
	SMMA_LO_00295	Divide using the long division algorithm (one-digit divisor, remainder).
	SMMA_LO_00296	Divide using the long division algorithm (three-digit dividend, one-digit divisor, no remainder).
	SMMA_LO_00297	Divide using the long division algorithm (three-digit dividend, one-digit divisor, remainder).
	SMMA_LO_00298	Divide using the long division algorithm (three-digit dividend, one-digit divisor, remainder).
	SMMA_LO_00300	Represent a quotient by using arrays, area models, or equations.
	SMMA_LO_00312	Find the quotient of $b$ divided by $a$ (combinations $6 \times 13$ to $9 \times 19$ ).
	SMMA_LO_00314	Estimate the quotient to the nearest ten (three-digit dividends, one-digit divisors).
(4.NF) Number and Operations— Fractions		
(4.NF.A) Extend understanding of fraction equivalence and ordering for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.		

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(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 numbers and sizes of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions, including fractions greater than 1.	SMMA_LO_00451	Find the missing numerator or denominator in an equivalent fraction (simplified fractions $1/2$ to $3/4$ ).
	SMMA_LO_00453	Find the missing numerator or denominator in an equivalent fraction (simplified fractions $1/2$ to $7/8$ ).
	SMMA_LO_00454	Determine if a fraction can be simplified; simplify if possible (simplified fractions $1/2$ to $7/8$ ).
	SMMA_LO_00455	Write a fraction in simplest form (simplified fractions $1/2$ to $7/8$ ).
	SMMA_LO_00456	Determine if a fraction can be simplified; simplify if possible (simplified fractions $1/2$ to $7/8$ ).
	SMMA_LO_00457	Find an equivalent fraction of a simplified fraction (simplified fractions $1/2$ to $8/9$ ).
	SMMA_LO_00458	Find three equivalent fractions (simplified fractions $1/2$ to $8/9$ ).
	SMMA_LO_00483	Identify the figures with the equivalent fractional parts shaded.
	SMMA_LO_01791	Generate a table of equivalent fractions for a fraction in simplest form.
	SMMA_LO_01792	Generate a table of equivalent fractions for a fraction not in simplest form.
	SMMA_LO_01793	Identify the fraction equivalent to the given fraction.
	SMMA_LO_00493	Determine the least common denominator of two fractions.

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(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 $\frac{1}{2}$ . 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.	SMMA_LO_00429	Use a model to compare two fractions (halves to eighths, unlike denominators).
	SMMA_LO_00432	Compare fractions to 1 on the number line (halves to eighths).
	SMMA_LO_00436	Using models, compare fractions (unlike denominators, halves to sixteenths).
	SMMA_LO_00437	Identify the fraction that is greater than a given fraction (unlike denominators, halves to eighths).
	SMMA_LO_00438	Using models, compare fractions (unlike denominators, halves to eighths).
	SMMA_LO_00440	Order three fractions from least to greatest (unlike denominators, halves to twelfths).
	SMMA_LO_00448	Compare fractions to 1 (halves to sixteenths).
	SMMA_LO_00462	Compare fractions (unlike denominators).
	SMMA_LO_00482	Identify the greatest or least fraction in a problem (unlike denominators).
	SMMA_LO_00495	Compare fractions (unlike denominators, to ninths).
	SMMA_LO_00497	Identify a list of fractions that is ordered from least to greatest (to sixths).
	SMMA_LO_00503	Identify the fraction that is between two fractions

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(4.NF.B) Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.		
(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. (The whole can be a set of objects.)	SMMA_LO_00441	Using models, add fractions, no simplifying (like denominators, thirds to eighths).
	SMMA_LO_00442	Using models, subtract fractions, no simplifying (like denominators, halves to eighths).
	SMMA_LO_00445	Identify the difference when a fraction is subtracted from 1 (fourths to twelfths).
	SMMA_LO_01709	Add fractions with like denominators (no simplifying).
(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. Justify decompositions, e.g., by using drawings or visual fraction models.	SMMA_LO_00449	Rewrite a fraction as a mixed number (halves to eighths).
	SMMA_LO_02146	Determine addition expressions that are equivalent to a given fraction.
	SMMA_LO_02191	Represent a fraction $a/b$ as a sum of fractions $1/b$ , where $a$ and $b$ are whole numbers and $b > 0$ , including when $a > b$ .
(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.	SMMA_LO_00460	Add mixed numbers; no simplifying (like denominators, thirds to twelfths).
	SMMA_LO_00461	Subtract mixed numbers; no simplifying (like denominators, thirds to twelfths).
	SMMA_LO_00463	Add mixed numbers; simplify if necessary (like denominators, halves to sixteenths).

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	SMMA_LO_00485	Subtract mixed numbers; simplify if necessary (like denominators).
	SMMA_LO_00446	Using a model, rewrite a mixed number as a fraction (halves to eighths).
	SMMA_LO_00450	Rewrite a mixed number as a fraction (fifths to ninths).
	SMMA_LO_00480	Add mixed numbers within a context; simplify if necessary (like denominators).
	SMMA_LO_00481	Subtract mixed numbers in context; simplify if necessary (like denominators).
	SMMA_LO_02504	Students add and subtract mixed numbers with like denominators. Students compare mixed numbers with unlike denominators.
	SMMA_LO_01624	Add mixed numbers with like denominators in context; simplify if necessary.
(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 drawings or visual fraction models and equations to represent the problem.	SMMA_LO_02004	Use a model and an equation to solve word problems involving the addition of fractions with like denominators.
	SMMA_LO_02016	Use a model and an equation to solve word problems involving the subtraction of fractions with like denominators.
	SMMA_LO_00480	Add mixed numbers within a context; simplify if necessary (like denominators).
	SMMA_LO_00481	Subtract mixed numbers in context; simplify if necessary (like denominators).
	SMMA_LO_01624	Add mixed numbers with like denominators in context; simplify if necessary.
	SMMA_LO_02504	Students add and subtract mixed numbers with like denominators. Students compare mixed numbers with unlike denominators.
(4.NF.B.4) Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.		

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(4.NF.B.4.a) Understand a fraction $a/b$ as a multiple of $1/b$ .	SMMA_LO_02005	Use fraction models to relate a fraction to a whole number times a unit fraction. Then, write an equation for this relationship.
(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.	SMMA_LO_02006	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.
(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.	SMMA_LO_01285	Determine the sale price of an item when the price is reduced by one-half, one-third, or one-fourth.
(4.NF.C) Understand 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.	SMMA_LO_02007	Express a fraction with denominator 10 as an equivalent fraction with denominator 100. Then, add that fraction to another fraction with denominator 100.
(4.NF.C.6) Use decimal notation to represent fractions with denominators 10 or 100.	SMMA_LO_00184	Match a fraction to a decimal (tenths, 0.1 to 0.9).
	SMMA_LO_00185	Determine the fraction and decimal that represent a model (base-ten blocks, tenths, 0.1 to 0.9).
	SMMA_LO_00187	Enter a decimal number for a mixed number (tenths, 1.1 to 9.9).
	SMMA_LO_00188	Find the missing decimal number on a number line (tenths, 0.1 to 0.9).
	SMMA_LO_00205	Enter the decimal equivalent for a mixed number (hundredths, 100 in denominator).
	SMMA_LO_00259	Determine the equivalent fraction for a decimal (the denominator is a factor of 100).
	SMMA_LO_00186	Mark the point on a number line that represents a decimal number (0.1 to 0.9).

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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.	SMMA_LO_00191	Compare decimal numbers (0.1 to 9.9).
	SMMA_LO_00218	Order three decimal numbers (tenths to hundredths).
	SMMA_LO_00216	Compare two decimal numbers (10.01 to 99.99).
	SMMA_LO_01328	Graph and interpret rainfall data in a chart.
(4.MD) Measurement and Data		
(4.MD.A) 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.	SMMA_LO_00792	Compare unlike customary units of length (inches, feet, and yards).
	SMMA_LO_00794	Identify the reasonable customary capacity of an object (cups, pints, quarts, and gallons).
	SMMA_LO_00799	Compare unlike customary units of capacity (cups, pints, quarts, and gallons).
	SMMA_LO_00803	Identify the reasonable length, width, or height of an object (millimeters, centimeters, and meters).
	SMMA_LO_00807	Identify the reasonable mass for an object (grams, kilograms, and milligrams).
	SMMA_LO_00811	Identify the reasonable capacity of an object (milliliters and liters).

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	SMMA_LO_00820	Compare unlike metric units and identify the correct statement (mm, cm, m, km; mL, L; mg, g, kg).
	SMMA_LO_01672	Convert hours to minutes.
	SMMA_LO_01703	Identify distances or objects that would be measured in cm, m, or km.
	SMMA_LO_01704	Identify the appropriate unit of measure (l, kl, g, kg, m, km).
	SMMA_LO_01730	Identify the appropriate unit of weight.
	SMMA_LO_01864	Choose the appropriate unit of capacity (ounce, cup, pint, quart, and gallon).
	SMMA_LO_02505	Students convert between measurement units.
(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.	SMMA_LO_00805	Find the perimeter of a polygon (decimal numbers, metric units).
	SMMA_LO_00817	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_00837	Convert units of time (seconds, minutes, hours, days, weeks, months, and years).
	SMMA_LO_01279	Identify the most reasonable answer to a division problem involving money.
	SMMA_LO_01583	Make a picture to find the change received from a purchase (change back from \$1.00).
	SMMA_LO_01585	Solve a division problem about money with extra information (round quotient to the nearest whole number).
	SMMA_LO_01591	Estimate the total cost of four items by rounding to the nearest dollar (sums to \$15.00).
	SMMA_LO_01597	Solve an addition problem in context (3 three-digit addends, regrouping).
	SMMA_LO_01598	Find the change from one dollar (item costs 55 to 99 cents).

Massachusetts Curriculum Framework for Mathematics 2017 Grade 4	Item Code	SuccessMaker Item Description
	SMMA_LO_01599	Solve a decimal subtraction problem in context (tenths, regrouping).
	SMMA_LO_01608	Solve a problem in context that involves adding three amounts expressed as dollars and cents.
	SMMA_LO_01609	Find the change from one dollar for two to four items (each 10, 15, or 20 cents).
	SMMA_LO_01613	Given the ending time and the elapsed time, find the starting time.
	SMMA_LO_01623	Determine the number of dollar bills needed to buy three to five items).
	SMMA_LO_01669	Estimate the difference by rounding to the nearest dollar (minuends \$5.00 to \$20.00, subtrahends \$3.00 to \$15.00).
	SMMA_LO_01764	Read and interpret a line plot.
	SMMA_LO_00166	Express yards and feet as an equivalent number of feet, or feet and inches as an equivalent number of inches.
	SMMA_LO_00181	Solve an addition problem by finding the total cost of two items (prices expressed as decimals, total < \$0.50, no regrouping).
	SMMA_LO_00809	Identify the fraction of a dollar a coin is worth (penny to half-dollar).
	SMMA_LO_01278	Identify the most reasonable answer to a multiplication problem involving money.
(4.MD.A.3) Apply the area and perimeter formulas for rectangles in real-world and mathematical problems.	SMMA_LO_00810	Find the area of a rectangle using a formula.
(4.MD.B) Represent and interpret data.		
(4.MD.B.4) Make a line plot (dot plot) representation 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 (dot plots).	SMMA_LO_01643	Choose a title for a line plot and label the units.
(4.MD.C) Geometric measurement: Understand concepts of angle and measure angles.		

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(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:	SMMA_LO_00617	Match the labeled angles to the correct angle notation.
(4.MD.C.6) Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	SMMA_LO_00631	Use a protractor to measure an angle.
	SMMA_LO_00636	Use a protractor to measure an angle.
	SMMA_LO_00646	Measure an angle using the appropriate protractor.
	SMMA_LO_00661	Measure complementary or supplementary angles and find the sum of the angle measures.
	SMMA_LO_00663	Measure complementary or supplementary angles and find the sum of the angle measures.
	SMMA_LO_00644	Select the appropriate protractor to measure an angle.
	SMMA_LO_00650	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_00657	Identify the better estimate for an angle measure.
(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.	SMMA_LO_00650	Use a protractor to measure an angle in a triangle or quadrilateral; then find the sum of all the angles in the figure.
(4.G) Geometry		
(4.G.A) 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.	SMMA_LO_00579	Identify line segments in three- and four-sided figures.

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	SMMA_LO_00630	Identify right, acute, and obtuse angles in polygons.
	SMMA_LO_00638	Draw parallel, perpendicular, or intersecting lines on a grid.
	SMMA_LO_00639	Identify the pairs of parallel line segments in a geometric drawing.
	SMMA_LO_00800	Draw a line segment using a ruler (to 1/4 inch and 0.5 cm).
	SMMA_LO_00598	Predict whether or not lines will intersect.
	SMMA_LO_00605	Identify line segments.
	SMMA_LO_00619	Identify parallel and perpendicular streets on a map.
	SMMA_LO_00624	Determine whether an angle is larger than, smaller than, or the same size as a right angle.
	SMMA_LO_00625	Identify the set of vertices on a grid can be connected to form a figure (triangle, quadrilateral, rectangle, or square).
	SMMA_LO_00628	Identify an angle as acute, right, or obtuse.
(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.	SMMA_LO_00621	In a set of quadrilaterals, identify all the parallelograms.
	SMMA_LO_00655	Identify acute, obtuse, and right triangles.
	SMMA_LO_01728	Classify and sort 2D geometric figures by properties and attributes.
	SMMA_LO_01774	Identify all triangles of a particular class (acute, right, or obtuse).

<b>Massachusetts Curriculum Framework for Mathematics 2017 Grade 4</b>	<b>Item Code</b>	<b>SuccessMaker Item Description</b>
(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.	SMMA_LO_00595	Identify the vertical line of symmetry.
	SMMA_LO_00597	Identify the horizontal line of symmetry.
	SMMA_LO_00608	Draw a vertical or horizontal line of symmetry.
	SMMA_LO_00623	Identify lines that are lines of symmetry.
	SMMA_LO_00647	Complete a symmetrical drawing.
	SMMA_LO_01699	Identify the lines of symmetry in an object.
	SMMA_LO_01773	Identify the shape with a given number of lines of symmetry.