SuccessMaker®

Indiana

**State Standards
Alignments for Mathematics**

Providing rigorous mathematics intervention
for K-8 learners with unparalleled precision

IN Standard	IN Standard Text	Item Description	Item ID
K.CA.1	Use objects, drawings, mental images, sounds, etc., to represent addition and subtraction within 10.	Count two set of objects to find the total (sums 2 to 5).	SMMA_LO_00005
		Count two sets of objects to find the total (sums 6 to 10).	SMMA_LO_00006
		Count the objects in two sets (sums 1 to 5).	SMMA_LO_00007
		Count the objects in two sets (sums 6 to 10).	SMMA_LO_00008
		Add using basic math facts displayed horizontally (sums 6 to 10).	SMMA_LO_00013
		Write an addition number sentence to represent a picture (sums 1 to 9).	SMMA_LO_00036
		Identify sets of objects that combined have a given sum (sums 6 to 9).	SMMA_LO_00726
		Identify a picture that represents a subtraction problem (minuends 5 to 10).	SMMA_LO_01235
		Identify the expression that represents a picture (minuends 2 to 9).	SMMA_LO_01414
		Identify the picture that represents a subtraction problem in context (minuends 2 to 10).	SMMA_LO_01542
		Model and apply joining stories to solve problems (sums 1 to 9).	SMMA_LO_01863
K.CA.2	Solve real-world problems that involve addition and subtraction within 10 (e.g., by using objects or drawings to represent the problem).	Identify the operation from pictures and contexts (sums 6 to 9, minuends 6 to 9).	SMMA_LO_00321
		Write a number sentence for an addition problem (sums 2 to 5).	SMMA_LO_01229
		Write a number sentence for an addition problem (sums 2 to 10).	SMMA_LO_01230
		Use a picture to solve a missing addend problem (sums 2 to 6).	SMMA_LO_01232
		Solve a subtraction problem in context (minuends 2 to 5, pictorial models).	SMMA_LO_01411
		Solve a subtraction problem in context (minuends 2 to 5, pictorial models).	SMMA_LO_01412
		Subtract using basic math facts (minuends 2 to 10).	SMMA_LO_01413
		Identify the pictorial solution to a subtraction problem (minuends 2 to 9).	SMMA_LO_01422
		Identify the pictorial solution to a problem in context (minuends 4 to 9).	SMMA_LO_01423
		Solve a problem in context by adding or subtracting 1.	SMMA_LO_01535
		Act out the solution to a subtraction problem in context (minuends 1 to 6).	SMMA_LO_01536
		Solve an addition problem in context (same objects, sums 2 to 5).	SMMA_LO_01540
		Solve an addition problem in context (different objects, sums 2 to 5).	SMMA_LO_01544
		Solve a subtraction problem in context (minuends 2 to 5).	SMMA_LO_01545
		Solve a problem in context by finding a missing addend (sums 2 to 5).	SMMA_LO_01546
		Solve a subtraction problem in context by finding how many more (minuends 2 to 5).	SMMA_LO_01550

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IN Standard	IN Standard Text	Item Description	Item ID
K.CA.2	Solve real-world problems that involve addition and subtraction within 10 (e.g., by using objects or drawings to represent the problem).	Identify and solve a number sentence for an addition problem in context (sums 2 to 9).	SMMA_LO_01553
		Identify and solve a number sentence for an addition problem in context (sums 2 to 9).	SMMA_LO_01555
		Identify the expression that represents a subtraction problem in context (minuends 2 to 5).	SMMA_LO_01559
		Identify and solve the number sentence for a subtraction problem in context (minuends 2 to 5).	SMMA_LO_01562
		Identify and solve a number sentence for a subtraction problem in context (minuends 2 to 5).	SMMA_LO_01568
K.CA.3	Use objects, drawings, etc., to decompose numbers less than or equal to 10 into pairs in more than one way, and record each decomposition with a drawing or an equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). [In Kindergarten, students should see equations and be encouraged to trace them, however, writing equations is not required.]	Decompose numbers 2–10 into pairs in more than one way by using objects.	SMMA_LO_02096
K.CA.4	Find the number that makes 10 when added to the given number for any number from 1 to 9 (e.g., by using objects or drawings), and record the answer with a drawing or an equation.	Model the number that makes 10 when added to a given number from 1 to 9; then identify the number.	SMMA_LO_02097
K.CA.5	Create, extend, and give an appropriate rule for simple repeating and growing patterns with numbers and shapes.	Extend a 1-2-1-2 pattern of geometric figures.	SMMA_LO_00520
		Extend a 1-1-2-2 pattern of geometric figures.	SMMA_LO_00522
		Extend a 1-1-2 or 1-2-2 pattern of congruent	SMMA_LO_00558
		Extend a 1-2-3 pattern of similar figures.	SMMA_LO_00560
		Extend a 1-2-3 pattern of geometric figures.	SMMA_LO_00585
		Identify the missing geometric figure in a 1-2-1-2 pattern.	SMMA_LO_00591
		R: Extend a 1-2-1-2 pattern of pictures.	SMMA_LO_00519
		R: Extend a 1-1-2-2 pattern of pictures.	SMMA_LO_00521
		R: Match patterns of geometric figures.	SMMA_LO_00539
		R: Extend a 1-2-2 pattern of pictures.	SMMA_LO_00556
		R: Identify the missing picture in a 1-2-3-1-2-3 pattern.	SMMA_LO_00607
K.DA.1	Identify, sort, and classify objects by size, number, and other attributes. Identify objects that do not belong to a particular group and explain the reasoning used.	Match simple geometric figures that have the same size, shape, and color.	SMMA_LO_00514
		Match pictures that are identical.	SMMA_LO_00515
		Match geometric figures that have the same size and shape (simple figures).	SMMA_LO_00516
		Match pictures with shapes that are alike.	SMMA_LO_00517
		Match the face of a geometric solid to a plane figure.	SMMA_LO_00518

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K.DA.1	Identify, sort, and classify objects by size, number, and other attributes. Identify objects that do not belong to a particular group and explain the reasoning used.	Move puzzle pieces to complete a puzzle (2 pieces).	SMMA_LO_00534
		Identify the figure that is a different color from a given figure.	SMMA_LO_00541
		Match congruent irregular polygons.	SMMA_LO_00545
		Identify the figure with a different shape.	SMMA_LO_00547
		Match a shape to a picture containing that shape.	SMMA_LO_00548
		Identify shapes that are alike.	SMMA_LO_00549
		Identify the figure that has a different number of sides from a given figure.	SMMA_LO_00553
		Match similar irregular polygons.	SMMA_LO_00555
		Identify matching congruent figures under rotation and/or reflection.	SMMA_LO_00557
		Match similar figures in different orientations.	SMMA_LO_00566
		Identify matching congruent geometric solids.	SMMA_LO_00567
		Identify the object modeled by a geometric figure.	SMMA_LO_00570
		Classify geometric figures by a shape attribute.	SMMA_LO_00576
		Identify similar three-dimensional figures.	SMMA_LO_00592
		Identify a pair of objects that are not the same size.	SMMA_LO_00692
		Identify the biggest or smallest object.	SMMA_LO_00695
		Identify the object that is a different length.	SMMA_LO_00709
		Identify the object that is a different height.	SMMA_LO_00712
		Use logical reasoning to identify the item that does not belong in a group.	SMMA_LO_01227
K.G.1	Describe the positions of objects and geometric shapes in space using the terms inside, outside, between, above, below, near, far, under, over, up, down, behind, in front of, next to, to the left of and to the right of.	Identify the object on the top, in the middle, or on the bottom.	SMMA_LO_00524
		Identify the object on the left or the right.	SMMA_LO_00525
		Identify the picture on the left or right.	SMMA_LO_00526
		Identify the object inside or outside a convex figure.	SMMA_LO_00532
		Identify the object that is the top, middle or bottom one.	SMMA_LO_00540
		Identify the object that is the top, middle, or bottom one.	SMMA_LO_00543
		Determine whether points are outside, inside, or on a geometric figure.	SMMA_LO_00552
		Identify the object that is near or far from another object.	SMMA_LO_00574
		Identify objects inside or outside a convex figure.	SMMA_LO_00575
		Identify the object behind or in front of another object in a three-dimensional perspective.	SMMA_LO_00584
		Move an object to a specified location (upper left, upper right, lower left, or lower right corner).	SMMA_LO_00590

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IN Standard	IN Standard Text	Item Description	Item ID
K.G.2	Compare two- and three-dimensional shapes in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	Match complex congruent figures in different orientations.	SMMA_LO_00581
		R: Count the number of sides in a polygon.	SMMA_LO_00586
		R: Identify figures with more or fewer than a given number of sides.	SMMA_LO_00587
		R: Identify corners (vertices) of polygons.	SMMA_LO_00589
		R: Count the corners (vertices) of a polygon (3 to 7 corners).	SMMA_LO_00596
K.G.3	Model shapes in the world by composing shapes from objects (e.g., sticks and clay balls) and drawing shapes.	Connect points on a geoboard to copy a figure.	SMMA_LO_00611
K.G.4	Compose simple geometric shapes to form larger shapes (e.g., create a rectangle composed of two triangles).	Match a plane figure to a geometric design that uses the figure.	SMMA_LO_00554
K.M.1	Make direct comparisons of the length, capacity, weight, and temperature of objects, and recognize which object is shorter, longer, taller, lighter, heavier, warmer, cooler, or holds more.	Match amounts of liquid in containers (3 amounts).	SMMA_LO_00689
		Identify the tallest object.	SMMA_LO_00694
		Identify the container with the greatest or least capacity.	SMMA_LO_00696
		Identify the group of objects that is 1 to 5 nonstandard units long or tall.	SMMA_LO_00701
		Identify the objects that are taller or shorter than a nonstandard unit.	SMMA_LO_00743
		Identify the smaller or bigger rectangle.	SMMA_LO_00747
		Identify which familiar object is heavier.	SMMA_LO_00781
K.NS.1	Count to at least 100 by ones and tens and count on by one from any number.	Order four numbers from least to greatest (1 to 9).	SMMA_LO_00950
		Find a missing number in a sequence, counting by 1's (1 to 20).	SMMA_LO_00951
		Find a missing number in a sequence, counting by 1's (1 to 9).	SMMA_LO_00960
		Find a missing number in a sequence, counting by 1's (10 to 20).	SMMA_LO_00970
		Find a missing number in a sequence, counting by 10's (10 to 100, visual support).	SMMA_LO_00971
		Find a missing number in a sequence, counting by 10's (10 to 100).	SMMA_LO_00981
		Find a missing number in a sequence, counting by 1's (11 to 50).	SMMA_LO_00982
		Find a missing number in a sequence, counting by 1's (51 to 99).	SMMA_LO_00983
		Identify four numbers ordered from least to greatest (two-digit).	SMMA_LO_00985
K.NS.2	Write whole numbers from 0 to 20 and recognize number words from 0 to 10. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Enter the number shown (0 to 4).	SMMA_LO_00001
		Enter the number shown (5 to 9).	SMMA_LO_00002
		Count two sets of objects to find the total (sums 4 to 6).	SMMA_LO_00004
		Enter the number shown (1 to 5).	SMMA_LO_00932
		Match a digit to a set with that number of objects (0 to 5).	SMMA_LO_00934

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K.NS.2	Write whole numbers from 0 to 20 and recognize number words from 0 to 10. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Count objects not arranged in a row (1 to 5 objects).	SMMA_LO_00935
		Count specific objects within a larger set (1 to 6 objects).	SMMA_LO_00936
		Identify a number from a spoken number (1 to 5).	SMMA_LO_00937
		Enter the number shown (1 to 9).	SMMA_LO_00942
		Count objects not arranged in a row (6 to 9 objects).	SMMA_LO_00943
		Identify a number from a spoken number (6 to 9).	SMMA_LO_00944
		Identify a number, model, or word with the same value (1 to 9).	SMMA_LO_00965
K.NS.3	Find the number that is one more than or one less than any whole number up to 20.	Find the number that comes before a given number, counting by 1's (1 to 9).	SMMA_LO_00949
K.NS.4	Say the number names in standard order when counting objects, pairing each object with one and only one number name and each number name with one and only one object. Understand that the last number name said describes the number of objects counted and that the number of objects is the same regardless of their arrangement or the order in which they were counted.	Find the next number in a sequence, counting by 1's (1 to 5).	SMMA_LO_00939
		Find the next number in a sequence, counting by 1's (1 to 5).	SMMA_LO_00940
		Find the next number in a sequence, counting by 1's (1 to 9).	SMMA_LO_00948
		Count objects by pairing each object with one number 1 to 10; determine how many objects there are.	SMMA_LO_02092
K.NS.5	Count up to 20 objects arranged in a line, a rectangular array, or a circle. Count up to 10 objects in a scattered configuration. Count out the number of objects, given a number from 1 to 20.	Count two sets of objects to find the total (sums 2 to 4).	SMMA_LO_00003
		Count objects arranged in a row (1-5 objects).	SMMA_LO_00933
		Match a digit to a set with that number of objects (0 to 5).	SMMA_LO_00934
		Make a group with one to five objects.	SMMA_LO_00938
		Make a group with 6 to 9 objects.	SMMA_LO_00945
		Identify the group of objects that represent a number (1 to 5 objects).	SMMA_LO_00956
		Count objects arranged in a row (one to nine objects).	SMMA_LO_00957
		Count specific objects within a larger set (6 to 9 objects).	SMMA_LO_00958
		Identify the number of objects for a word name. (1 to 9 objects).	SMMA_LO_00964
		Identify a picture that represents an addition problem (sums 2 to 6).	SMMA_LO_01228
		Count objects by pairing each object with one number 1 to 10; determine how many objects there are when 1 more is added.	SMMA_LO_02093
		R: Move objects to show a one-to-one correspondence (1 to 5 objects).	SMMA_LO_00925
K.NS.6	Recognize sets of 1 to 10 objects in patterned arrangements and tell how many without counting.	Match a digit to a set with that number of objects (0 to 5).	SMMA_LO_00934

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K.NS.7	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g., by using matching and counting strategies).	Identify a set with the same number of objects as a given set (1 to 5 objects).	SMMA_LO_00922
		Identify a group with more objects than a given group (1 to 5 objects).	SMMA_LO_00923
		Identify a group with fewer objects than a given group (1 to 5 objects).	SMMA_LO_00924
		Make a set with the same number of objects as a given set (1 to 5 objects).	SMMA_LO_00926
		Make a group with one more object than a given group (one to five objects).	SMMA_LO_00927
		Make a group with one fewer object than a given group (1 to 5 objects).	SMMA_LO_00928
		Make a group with the same number of objects as a given group (6 to 9 objects).	SMMA_LO_00929
		Make a group with one more object than a given group (six to nine objects).	SMMA_LO_00930
		Make a group with one fewer object than a given group (6 to 9 objects).	SMMA_LO_00931
		Create a set with the same, more, or fewer number of objects than a given group (1 to 9	SMMA_LO_00953
		Create a set with one more object than a given set (1 to 9 objects).	SMMA_LO_00954
		Create a set with one fewer object than a given set (1 to 9 objects).	SMMA_LO_00955
		Identify the group with the greatest number of shapes of a given type (1 to 6).	SMMA_LO_00959
		R: Match objects to show a one-to-one correspondence (2 to 5 objects).	SMMA_LO_00921
K.NS.8	Compare the values of two numbers from 1 to 20 presented as written numerals.	Identify a number that is greater than or less than a spoken number (1 to 9).	SMMA_LO_00946
		Identify the number with the greatest value (1 to 9).	SMMA_LO_00947
K.NS.9	Use correctly the words for comparison, including: one and many; none, some and all; more and less; most and least; and equal to, more than and less than.	Identify the container with the greatest or least capacity.	SMMA_LO_00696
		Make a group with one more object than a given group (one to five objects).	SMMA_LO_00927
		Make a group with one fewer object than a given group (1 to 5 objects).	SMMA_LO_00928
		Make a group with one more object than a given group (six to nine objects).	SMMA_LO_00930
		Make a group with one fewer object than a given group (6 to 9 objects).	SMMA_LO_00931
		Identify the number with the greatest value (1 to 9).	SMMA_LO_00947
		Create a set with one more object than a given set (1 to 9 objects).	SMMA_LO_00954
		Create a set with one fewer object than a given set (1 to 9 objects).	SMMA_LO_00955
		Identify the group with the greatest number of shapes of a given type (1 to 6).	SMMA_LO_00959

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K.NS.11	Develop initial understandings of place value and the base 10 number system by showing equivalent forms of whole numbers from 10 to 20 as groups of tens and ones using objects and drawings.	Find a number equal to 2 to 9 ones.	SMMA_LO_00972
		Enter the number equal to 1 to 9 ones.	SMMA_LO_00973
		Decompose numbers from 11 to 19 into ten ones and some further ones.	SMMA_LO_02094
		Compose numbers from 11 to 19 given ten ones and some further ones by using objects.	SMMA_LO_02095
1.CA.1	Demonstrate fluency with addition facts and the corresponding subtraction facts within 20. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 − 4 = 13 − 3 − 1 = 10 − 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 − 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). Understand the role of 0 in addition and subtraction.	Add using basic math facts (sums 1 to 5).	SMMA_LO_00010
		Add using basic math facts displayed horizontally (sums 2 to 5).	SMMA_LO_00011
		Add two addends (sums 6 to 10).	SMMA_LO_00012
		Add using basic math facts (addends 0 to 5, sums 1 to 5).	SMMA_LO_00014
		Add 1 to a number (sums 1 to 10).	SMMA_LO_00015
		Add two addends (one-digit addends, sums 6 to 10).	SMMA_LO_00016
		Add doubles (sums 2 to 18).	SMMA_LO_00017
		Add doubles (sums 4 to 18).	SMMA_LO_00019
		Add two consecutive addends (one-digit addends, sums 1 to 17).	SMMA_LO_00020
		Add two consecutive addends displayed horizontally (one-digit addends, sums 1 to 17).	SMMA_LO_00021
		Add using basic math facts (sums 11 to 18).	SMMA_LO_00022
		Add using basic math facts displayed horizontally (sums 10 to 18).	SMMA_LO_00023
		Add using basic math facts (sums 1 to 18).	SMMA_LO_00024
		Add four addends (one-digit addends, sums 3 to 10).	SMMA_LO_00030
		Add zero to a number (sums 1 to 9).	SMMA_LO_00035
		Find the missing addend in a number sentence.	SMMA_LO_00037
		Add 10 to a number (sums 11 to 19).	SMMA_LO_00038
		Add 1- and 2-digit addends (sums 11-19, audio presentation).	SMMA_LO_00039
		Add two addends (sums 10 to 18).	SMMA_LO_00041
		Add using basic math facts displayed horizontally (sums 10 to 18).	SMMA_LO_00042
		Add 9 to a number (sums 10 to 18).	SMMA_LO_00045
		Find the missing addend in a number sentence (sums 10 to 18).	SMMA_LO_00048
		Complete fact families with four facts (sums 3 to 10).	SMMA_LO_00322
		Solve for c in a + b = c (sums 0 to 9).	SMMA_LO_00323
		Solve for c in a - b = c (differences 1 to 9).	SMMA_LO_00324
		Solve for c in a + b = c (sums 10 to 18).	SMMA_LO_00327
		Solve for c in a - b = c (differences 1 to 9).	SMMA_LO_00329
		Solve for a or b in a + b = c (sums 0 to 9).	SMMA_LO_00330
		Solve for a or b in a - b = c (differences 0 to 9).	SMMA_LO_00331
		Solve for a or b in a + b = c (sums 10 to 18).	SMMA_LO_00332
		Solve for a or b in a - b = c (differences 0 to 18).	SMMA_LO_00333

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1.CA.1	Demonstrate fluency with addition facts and the corresponding subtraction facts within 20. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). Understand the role of 0 in addition and subtraction.	Identify a missing number in an addition and subtraction fact family.	SMMA_LO_01035
		Use guess and check to solve an addition and subtraction problem (basic facts).	SMMA_LO_01240
		Subtract using basic math facts displayed horizontally (minuends 0 to 5).	SMMA_LO_01415
		Subtract using basic math facts (minuends 0 to 5).	SMMA_LO_01416
		Subtract using basic math facts displayed horizontally (minuends 6 to 9).	SMMA_LO_01417
		Subtract using basic math facts (minuends 6 to 9).	SMMA_LO_01418
		Subtract using basic math facts (minuends 1 to 9).	SMMA_LO_01419
		Subtract using basic math facts (differences are 0).	SMMA_LO_01420
		Subtract 1 from a number (minuends 1 to 9).	SMMA_LO_01421
		Subtract a number from 10 (subtrahends 1 to 9).	SMMA_LO_01424
		Subtract a number from its double (differences 1 to 9).	SMMA_LO_01425
		Subtract using basic math facts displayed horizontally (minuends 10 to 14, subtrahends 1 to 9).	SMMA_LO_01429
		Subtract (student choice, minuends 10 to 15, subtrahends 0 to 5, no regrouping).	SMMA_LO_01430
		Find the missing subtrahend in a subtraction number sentence (minuends 0 to 9).	SMMA_LO_01432
		Subtract using basic math facts (student choice, minuends 16 to 19, subtrahends 1 to 9).	SMMA_LO_01433
		Subtract using basic math facts (minuends 15 to 18, subtrahends 6 to 9).	SMMA_LO_01434
		Subtract using basic math facts (minuends 11 to 19, subtrahends 1 to 8).	SMMA_LO_01435
		Subtract using basic math facts (minuends 11 to 18, subtrahends 1 to 9).	SMMA_LO_01436
		Find the missing minuend in a subtraction number sentence (minuends 0 to 9).	SMMA_LO_01440
		Subtract 10 from a number (minuends 11 to 19, horizontal presentation).	SMMA_LO_01442
		Subtract a one-digit number from a two-digit number displayed horizontally (minuends 11 to 19, subtrahends 1 to 9).	SMMA_LO_01443
		Subtract using basic math facts (minuends 15 to 18, subtrahends 6 to 9).	SMMA_LO_01444
		Subtract (minuends 11 to 19, subtrahends 1 to 9, no regrouping).	SMMA_LO_01445
		Find the missing subtrahend in a subtraction number sentence (minuends 10 to 14).	SMMA_LO_01446
		Find the missing subtrahend in a subtraction number sentence (minuends 15 to 18).	SMMA_LO_01449
		Find the missing minuend in a subtraction number sentence (minuends 10 to 14).	SMMA_LO_01451

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1.CA.1	Demonstrate fluency with addition facts and the corresponding subtraction facts within 20. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). Understand the role of 0 in addition and subtraction.	Find the missing minuend in a subtraction number sentence (minuends 15 to 18).	SMMA_LO_01455
		Find the missing subtrahend in a subtraction number sentence (minuends 11 to 19).	SMMA_LO_01464
		Find the missing minuend in a subtraction number sentence (minuends 11 to 19).	SMMA_LO_01468
		Identify the missing number (addend or sum) in an addition equation, for numbers 20 and less.	SMMA_LO_02010
		Identify the missing number (minuend, subtrahend, or difference) in a subtraction equation, for numbers 20 and less.	SMMA_LO_02014
		Apply the Commutative Property of Addition as a strategy to add two numbers; use fact families as a strategy to subtract two numbers.	SMMA_LO_02021
		Use the Associative Property of Addition to add two numbers by regrouping the numbers into a ten and some ones.	SMMA_LO_02022
		Solve a subtraction problem by finding the missing addend.	SMMA_LO_02023
		Subtract two numbers by regrouping the numbers into a ten and some ones.	SMMA_LO_02026
		R: Create a fact family (addition and subtraction).	SMMA_LO_01857
1.CA.2	Solve real-world problems involving addition and subtraction within 20 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).	Choose the expression that can represent a problem with extra information; then solve (addition or subtraction).	SMMA_LO_01239
		Identify a number sentence that can be used to solve a problem with extra information (addition or subtraction, basic facts).	SMMA_LO_01242
		Act out the solution to multi-step problem in context (addends, minuends 1 to 4).	SMMA_LO_01538
		Solve an addition problem involving money (sums 3 to 9 cents).	SMMA_LO_01543
		Make a picture to solve a two-step problem in context (addition and subtraction).	SMMA_LO_01551
		Make a picture to solve a two-step problem in context (addition and subtraction).	SMMA_LO_01552
		Solve a problem in context by finding a missing addend (three addends, sums to 20).	SMMA_LO_01574
		Solve an addition problem in context (two-digit addends, sums less than 100, no regrouping).	SMMA_LO_01656
		R: Identify a picture that represents a subtraction problem (one or two-digit).	SMMA_LO_01244
		R: Identify the picture that can be used to solve an addition or subtraction problem.	SMMA_LO_01255
		R: Identify the number sentence that solves a subtraction problem in context (minuends 11 to 18, subtrahends 1 to 9).	SMMA_LO_01439

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IN Standard	IN Standard Text	Item Description	Item ID
1.CA.4	Solve real-world problems that call for addition of three whole numbers whose sum is within 20 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).	Act out the problem to find the sum (basic facts).	SMMA_LO_01241
		Act out a problem to find the sum of three numbers (one-digit addends).	SMMA_LO_01249
		Act out the solution to an addition problem in context (three addends, sums 1 to 9).	SMMA_LO_01537
		Solve an addition problem with three addends in context (sums 3 to 10).	SMMA_LO_01549
		Solve an addition problem with three addends in context (sums 3 to 10).	SMMA_LO_01557
		Solve an addition problem in context (three addends, sums 9 to 18).	SMMA_LO_01576
		R: Add three addends (sums 2 to 5).	SMMA_LO_00026
		R: Add three addends (audio presentation, sums 3 to 5).	SMMA_LO_00027
		R: Add three addends (sums 6 to 10).	SMMA_LO_00028
		R: Add three addends displayed horizontally (sums 6 to 10).	SMMA_LO_00029
		R: Add three addends (one-digit addends, sums 11 to 19).	SMMA_LO_00031
		R: Add three addends (one-digit addends, sums 10 to 19).	SMMA_LO_00032
		R: Find the missing addend in a number sentence (three addends, sums 1 to 9).	SMMA_LO_00052
		R: Find the missing addend in a number sentence (three addends, sums 10 to 19).	SMMA_LO_00066
1.CA.5	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones, and that sometimes it is necessary to compose a ten.	Add two multiples of 10 (student choice, sums 20 to 90).	SMMA_LO_00025
		Add two addends (one- and two-digit addends, sums 11 to 99, no regrouping).	SMMA_LO_00033
		Add two addends (student choice, a one-digit and a two-digit addend, sums 20 to 98, regrouping).	SMMA_LO_00054
		Add two addends (student choice, two-digit addends, sums 30 to 98, regrouping).	SMMA_LO_00067
		Add three addends (student choice, one- and two-digit addends, sums 30 to 98, regrouping).	SMMA_LO_00090
		Explain how to solve an addition problem, either by using place value blocks or by rewriting the problem.	SMMA_LO_02012
		Apply the Associative Property of Addition to add three numbers.	SMMA_LO_02135
1.CA.6	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false (e.g., Which of the following equations are true and which are false? 6 = 6, 7 = 8 − 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2).	Determine if equations involving addition and subtraction are true or false.	SMMA_LO_02024
		R: Identify the missing operation in a subtraction or addition number sentence (basic facts).	SMMA_LO_01031
1.CA.7	Create, extend, and give an appropriate rule for number patterns using addition within 100.	Find the missing two-digit number in a sequence of odd or even numbers.	SMMA_LO_01002
		Count by 5's, 6's, or 7's (through 70).	SMMA_LO_01058
		Count by 8's or 9's (up to 90).	SMMA_LO_01061

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IN Standard	IN Standard Text	Item Description	Item ID
1.DA.1	Organize and interpret data with up to three choices (What is your favorite fruit? apples, bananas, oranges); ask and answer questions about the total number of data points, how many in each choice, and how many more or less in one choice compared to another.	Determine the most or the least from a horizontal or vertical pictograph (four to six items).	SMMA_LO_00135
		Read and interpret a horizontal or vertical pictograph (six items).	SMMA_LO_00150
		Read a pictograph (3 categories, 1 to 9 items per category).	SMMA_LO_01124
		Create a table from a vertical bar graph.	SMMA_LO_01132
		Within the context of repeated selections without replacement from a bag containing two balls of the same color, label events as certain or impossible.	SMMA_LO_01141
		Read and interpret a pictograph about birds counted (2 to 5 birds in each row).	SMMA_LO_01299
		R: Match each set of tally marks to a total (1 to 9).	SMMA_LO_00952
		R: Formulate questions around numerical data.	SMMA_LO_01642
1.G.1	Identify objects as two-dimensional or three-dimensional. Classify and sort two-dimensional and three-dimensional objects by shape, size, roundness and other attributes. Describe how two-dimensional shapes make up the faces of three-dimensional objects.	Sort two-dimensional and three-dimensional shapes.	SMMA_LO_01677
1.G.2	Distinguish between defining attributes of two- and three-dimensional shapes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size). Create and draw two-dimensional shapes with defining attributes.	Sort two-dimensional and three-dimensional shapes.	SMMA_LO_01677
		R: Identify open and closed figures.	SMMA_LO_00580
1.G.3	Investigate and predict the result of composing and decomposing two- and three-dimensional shapes.	Identify puzzle pieces needed to make a given shape, and then complete the puzzle (4 to 6 pieces).	SMMA_LO_00564
		R: Match a plane figure to a geometric design that uses the figure.	SMMA_LO_00554
		R: Match compound figures that have the same shape (different sizes).	SMMA_LO_00594
1.G.4	Partition circles and rectangles into two and four equal parts; describe the parts using the words halves, fourths, and quarters; and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of, the parts. Understand for partitioning circles and rectangles into two and four equal parts that decomposing into equal parts creates smaller parts.	Match halves of figures (left and right).	SMMA_LO_00561
		Match halves of figures (top and bottom).	SMMA_LO_00563
		Describe fractions in terms of the number of parts in a whole and the relative size of those parts (e.g., larger, smaller).	SMMA_LO_02137

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IN Standard	IN Standard Text	Item Description	Item ID
1.M.1	Use direct comparison or a nonstandard unit to compare and order objects according to length, area, capacity, weight, and temperature.	Find the total length of two objects (nonstandard units, sums 2 to 5).	SMMA_LO_00720
		Identify an object given the estimated height and width in customary units.	SMMA_LO_00728
		Order three objects by length.	SMMA_LO_02147
		R: Match objects of the same height (3 heights).	SMMA_LO_00687
		R: Match objects of the same length (3 lengths).	SMMA_LO_00688
		R: Given 3 objects, Identify the shortest or longest object.	SMMA_LO_00693
		R: Count to find how long or tall (2 to 9 nonstandard units).	SMMA_LO_00705
		R: Find the height (2 to 9 nonstandard units).	SMMA_LO_00710
		R: Count to find the height and width (2 to 5 nonstandard units).	SMMA_LO_00713
		R: Estimate the height and width (2 to 5 nonstandard units).	SMMA_LO_00721
		R: Identify an object given the height and width in nonstandard units.	SMMA_LO_00725
		R: Find the distance between two objects (2 to 8 nonstandard units).	SMMA_LO_00732
		R: Measure the length of an object (2 to 7 nonstandard units).	SMMA_LO_00777
1.M.2	Tell and write time to the nearest half-hour and relate time to events (before/after, shorter/longer) using analog clocks. Understand how to read hours and minutes using digital clocks.	Tell time to the hour using an analog clock.	SMMA_LO_00714
		Tell time to the hour using digital and analog clocks.	SMMA_LO_00716
		Tell time to the half-hour using an analog clock.	SMMA_LO_00724
		R: Identify the hour or minute hand of a clock.	SMMA_LO_00697
1.M.3	Find the value of a collection of pennies, nickels, and dimes.	Determine the number of cents in 1 to 100 pennies, 1 to 20 nickels, or 1 to 10 dimes.	SMMA_LO_00143
		Enter the amount of money shown (1 to 5 cents in pennies).	SMMA_LO_00699
		Enter the amount of money shown (6 to 9 cents in pennies).	SMMA_LO_00704
		Enter the amount of money shown (11 to 50 cents in pennies and dimes).	SMMA_LO_00715
		Enter the amount of money shown (10 to 19 cents in pennies, nickels, and dimes).	SMMA_LO_00722
		Find equivalence of nickels and dimes (1 to 5 dimes).	SMMA_LO_00738
		Identify the given amount of money in coins (5 to 50 cents in nickels and dimes).	SMMA_LO_00740
		Show another way to represent an amount of money (10 to 24 cents in pennies, nickels, and dimes).	SMMA_LO_00745
		R: Identify nickels or dimes.	SMMA_LO_00698

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IN Standard	IN Standard Text	Item Description	Item ID
1.NS.1	Count to at least 120 by ones, fives, and tens from any given number. In this range, read and write numerals and represent a number of objects with a written numeral.	Identify a written number from a spoken number (two-digit).	SMMA_LO_00977
		Identify a two-digit number, model, or expression that has a different value.	SMMA_LO_00991
		Find a missing number in a sequence, counting by 10's (two-digit, non multiples of 10).	SMMA_LO_00992
		Enter the number for a word name (two-digit).	SMMA_LO_01001
		Find a missing number in a sequence, counting up or down by 5's (two-digit).	SMMA_LO_01004
1.NS.2	Understand that 10 can be thought of as a group of ten ones — called a "ten." Understand that the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. Understand that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	Enter the number equal to 1 to 9 tens.	SMMA_LO_00974
		Enter the number of tens for a given multiple of ten (10 to 90).	SMMA_LO_00975
		Given a number (1-9) of objects, determine how many more objects are needed to make a ten.	SMMA_LO_02017
		Model the numbers from 11 to 19 with place value blocks.	SMMA_LO_02018
		Model multiples of 10 (from 10 to 90) with place value blocks.	SMMA_LO_02019
		Compose numbers from 11 to 19 given ten ones and some further ones by using objects.	SMMA_LO_02095
1.NS.3	Match the ordinal numbers first, second, third, etc., with an ordered set up to 10 items.	Identify the nth object in a sequence (first to fifth).	SMMA_LO_00941
		Identify the ordinal word for the nth object in a sequence (first to fifth).	SMMA_LO_00968
1.NS.4	Use place value understanding to compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	Compare numbers using < or > symbols (1 to 19).	SMMA_LO_00325
		Compare numbers using < or > symbols (20 to 99).	SMMA_LO_00328
		Identify two numbers that make an inequality true (two-digit).	SMMA_LO_00997
		Find two numbers within a range (two-digit).	SMMA_LO_00998
		Identify the greatest or least number (two-digit).	SMMA_LO_00999
		R: Compare sums (sums 1 to 9).	SMMA_LO_00326
		R: Compare differences (minuends 1 to 9).	SMMA_LO_00337
		R: Identify two numbers that make an inequality true (0 to 9).	SMMA_LO_00994
1.NS.5	Find mentally 10 more or 10 less than a given two-digit the number without having to count, and explain the thinking process used to get the answer.	Mentally find 10 more or 10 less than a given two-digit number; model the solution with place value blocks.	SMMA_LO_02020
1.NS.6	Show equivalent forms of whole numbers as groups of tens and ones, and understand that the individual digits of a two-digit number represent amounts of tens and ones.	Find the number of a set of objects (grouped tens and ones; two-digit).	SMMA_LO_00976
		Show a number using base-ten blocks (two-digit).	SMMA_LO_00978
		Enter the number equal to a given number of ones and tens (0 to 9 tens, 1 to 9 ones).	SMMA_LO_00979
		Enter how many tens and ones for a number (two-digit).	SMMA_LO_00980

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IN Standard	IN Standard Text	Item Description	Item ID
1.NS.6	Show equivalent forms of whole numbers as groups of tens and ones, and understand that the individual digits of a two-digit number represent amounts of tens and ones.	Find two numbers when given place value clues (two-digit).	SMMA_LO_00990
		Identify a number with a given digit in the ones or tens place.	SMMA_LO_00995
		Find two numbers when given place value clues (two-digit).	SMMA_LO_01049
2.CA.1	Add and subtract fluently within 100.	Add a multiple of 10 and a one-digit number displayed horizontally (sums 11 to 99).	SMMA_LO_00040
		Add two multiples of 10 displayed horizontally (sums 20 to 90).	SMMA_LO_00044
		Add two addends displayed horizontally (one- and two-digit addends, sums 11 to 99).	SMMA_LO_00049
		Find the missing addend in a number sentence (a multiple of 10 and a one-digit addend, sums 11 to 99, no regrouping).	SMMA_LO_00050
		Find the sum of two numbers displayed horizontally (a one-digit and a two-digit addend, sums 20 to 98, regrouping).	SMMA_LO_00055
		Add three addends (two-digit addends, sums 33 to 99, no regrouping).	SMMA_LO_00056
		Add three addends displayed horizontally (one-digit addends, sums 20 to 27).	SMMA_LO_00062
		Add two addends displayed horizontally (two-digit addends, sums 21 to 99).	SMMA_LO_00064
		Find the missing addend in a number sentence (a one-digit and a two-digit addend, sums 10 to 99, no regrouping).	SMMA_LO_00070
		Find the missing addend in a number sentence (three addends, sums 20 to 27, regrouping).	SMMA_LO_00082
		Find the missing addend in a number sentence (two addends, sums 20 to 98, regrouping).	SMMA_LO_00084
		Solve for a or b in a + b = c (sums 10 to 108).	SMMA_LO_00336
		Solve for c in a - b = c (minuends 20 to 99, subtrahends 1 to 9, no regrouping).	SMMA_LO_00338
		Solve for c in a - b = c (minuends 20 to 99, two-digit subtrahends, no regrouping).	SMMA_LO_00340
		Solve for a or b in a + b = c (sums 12 to 98).	SMMA_LO_00341
		Solve for c in a - b = c (minuends 20 to 99, regrouping).	SMMA_LO_00342
		Solve for a or b in a - b = c (minuends 20 to 99, no regrouping).	SMMA_LO_00343
		Solve for a or b in a - b = c (minuends 21 to 99, subtrahends 1 to 9, no regrouping).	SMMA_LO_00347
		Find a number that is one less or one more than a given number (two-digit).	SMMA_LO_00984
		Find the difference between two numbers (two-digit, presented as a sentence).	SMMA_LO_01000
		Identify a missing number in related addition and subtraction number sentences (two-digit sums, two-digit differences).	SMMA_LO_01060
		Identify if a sum or difference of two numbers is odd or even (one- or two-digit numbers).	SMMA_LO_01079
		Subtract 1 from a number (two-digit minuends, no regrouping).	SMMA_LO_01427

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2.CA.1	Add and subtract fluently within 100.	Subtract multiples of 10 (minuends 20 to 90, subtrahends 10 to 80, horizontal presentation).	SMMA_LO_01438
		Subtract two numbers displayed horizontally (counting up strategy, minuends 21 to 98, subtrahends 2 to 9, regrouping).	SMMA_LO_01462
		Find the missing subtrahend in a subtraction number sentence (minuends 21 to 99).	SMMA_LO_01470
		Subtract two numbers displayed horizontally (counting up strategy, minuends 25 to 98, subtrahends 6 to 9, regrouping).	SMMA_LO_01472
		Find the missing minuend in a number sentence (minuends 21 to 99).	SMMA_LO_01478
		Find the missing subtrahend in a number sentence (minuends 10 to 99).	SMMA_LO_01480
		Find the missing minuend in a subtraction number sentence (minuends 10 to 99, no regrouping).	SMMA_LO_01486
		Find the difference of two whole numbers (two-digit numbers, regrouping).	SMMA_LO_01488
		Find the missing minuend in a subtraction number sentence (minuends 20 to 98, subtrahends 11 to 89).	SMMA_LO_01491
		R: Add three multiples of 10 (student choice, sums 30 to 90).	SMMA_LO_00043
		R: Add three addends (student choice, one-digit addends, sums 20 to 27).	SMMA_LO_00069
		R: Add three addends (student choice, one-digit and two-digit addends, sums 21 to 99, no regrouping).	SMMA_LO_00079
		R: Identify the missing operation (sums 20 to 99, differences 10 to 70).	SMMA_LO_01055
		R: Subtract two multiples of 10 (student choice, minuends 20 to 90, subtrahends 10 to 80).	SMMA_LO_01426
		R: Subtract (student choice, minuends 21 to 95, subtrahends 1 to 9, no regrouping).	SMMA_LO_01428
		R: Subtract multiples of 10 (student choice, minuends 20 to 90, subtrahends 10 to 80).	SMMA_LO_01437
		R: Subtract 10 from a two-digit number (student choice, minuends 11 to 19).	SMMA_LO_01441
		R: Subtract (minuends 21 to 99, subtrahends 1 to 9, no regrouping).	SMMA_LO_01450
		R: Subtract a multiple of 10 from a 2-digit number (minuends 11-99, vertical presentation).	SMMA_LO_01452
		R: Subtract (student choice, minuends 21 to 99, no regrouping).	SMMA_LO_01454
		R: Subtract two-digit numbers with regrouping (vertical presentation).	SMMA_LO_01463
		R: Subtract two-digit numbers with regrouping (vertical presentation).	SMMA_LO_01473
		R: Explain how to solve a subtraction problem, either by using place value blocks or by rewriting the problem as an addition problem.	SMMA_LO_02013

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IN Standard	IN Standard Text	Item Description	Item ID
2.CA.2	Solve real-world problems involving addition and subtraction within 100 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem). Use estimation to decide whether answers are reasonable in addition problems.	Measure two lengths and find the sum (metric, sums 2 to 9).	SMMA_LO_00753
		Measure two metric lengths, write an addition problem, and find the sum (sums 2 to 12 centimeters).	SMMA_LO_00756
		Choose an operation to solve a problem with extra information; then solve (addition or subtraction, basic facts).	SMMA_LO_01247
		Work backwards to solve a problem with a missing number.	SMMA_LO_01266
		Calculate the difference between the life spans of two animals (differences 2 to 59).	SMMA_LO_01310
		Solve an addition problem in context (two-digit addends, sums less than 100, no regrouping).	SMMA_LO_01556
		Solve a problem with extra information (addition).	SMMA_LO_01558
		Solve a subtraction problem in context (two-digit minuends, one-digit subtrahends, no regrouping).	SMMA_LO_01560
		Solve a subtraction problem in context to find how much is left (two-digit numbers, no regrouping).	SMMA_LO_01561
		Solve a subtraction problem to find a person's age (minuends 1 to 99, subtrahends 1 to 9, no regrouping).	SMMA_LO_01563
		Identify the expression that gives the best estimate for an addition or subtraction problem in context (two-digit numbers).	SMMA_LO_01566
		Solve an addition problem in context (extra information, sums to 50, no regrouping).	SMMA_LO_01567
		Estimate the sum or difference in a money problem by rounding to the nearest 10 (two-digit sums and differences).	SMMA_LO_01580
		Solve a subtraction problem in context (extra information, minuends 2 to 99, no regrouping).	SMMA_LO_01581
		Solve an addition problem in context (four addends, sums 0 to 25).	SMMA_LO_01587
		Read and interpret a table about temperature.	SMMA_LO_01646
		Solve a one-step equation (addition, sums to 100).	SMMA_LO_01686
		Identify the missing variable of addition or subtraction equations (sums 10 to 50, minuends 10 to 50).	SMMA_LO_01687
		Read and interpret a table.	SMMA_LO_01695
		R: Find the sum or difference when a two-digit number is added to or subtracted from a number (base-ten block models).	SMMA_LO_00989
		R: Identify a number sentence that can be used to solve a problem with extra information (addition or subtraction, basic facts).	SMMA_LO_01250

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IN Standard	IN Standard Text	Item Description	Item ID
2.CA.4	Add and subtract within 1000, using models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones, and that sometimes it is necessary to compose or decompose tens or hundreds.	Add two multiples of 100 (student choice, sums 200 to 900).	SMMA_LO_00046
		Add two multiples of 10 (student choice, sums 100 to 180).	SMMA_LO_00047
		Add three multiples of 10 (sums 100 to 190, regrouping).	SMMA_LO_00051
		Add two addends (student choice, two-digit addends, sums 100 to 189, regrouping 10's to 100's).	SMMA_LO_00053
		Add two 3-digit numbers without regrouping (sums 200-999).	SMMA_LO_00058
		Add two addends (student choice, a two-digit and a three-digit addend, sums 120 to 998, regrouping).	SMMA_LO_00059
		Add three addends (student choice, two-digit addends, sums 100 to 199, regrouping from tens to hundreds place).	SMMA_LO_00060
		Add two addends (student choice, three-digit addends, sums 200 to 998, regrouping).	SMMA_LO_00061
		Add two addends (student choice, a two-digit and a three-digit addend, sums 100 to 999, no regrouping).	SMMA_LO_00065
		Add two addends (student choice, three-digit addends, sums 200 to 999, no regrouping).	SMMA_LO_00071
		Find the missing addend in a number sentence (multiples of 10, sums 100 to 180).	SMMA_LO_00074
		Add two addends (student choice, two-digit addends, sums 100 to 198, regrouping).	SMMA_LO_00075
		Add two addends (student choice, three-digit addends, sums 300 to 989, no regrouping).	SMMA_LO_00081
		Add two addends (student choice, a two-digit and a three-digit addend, sums 120 to 999, regrouping).	SMMA_LO_00083
		Add two addends (student choice, three-digit addends, sums 210 to 999, regrouping).	SMMA_LO_00085
		Add three addends (student choice, one- and two-digit addends, sums 100 to 198, no regrouping).	SMMA_LO_00087
		Add two addends (a two-digit and a three-digit addend, sums 111 to 899, regrouping).	SMMA_LO_00089
		Add three addends (student choice, one- and two-digit addends, sums 100 to 207, regrouping).	SMMA_LO_00092
		Add three addends (student choice, two-digit addends, sums 40 to 297, regrouping).	SMMA_LO_00095
		Find the sum or difference when ones, tens, or hundreds are added to or subtracted from a three-digit number (base-ten block models).	SMMA_LO_01017
		Subtract two multiples of 100 (student choice, minuends 200 to 900, subtrahends 100 to 800).	SMMA_LO_01447
		Subtract two multiples of 10 (minuends 100 to 180, subtrahends 10 to 90).	SMMA_LO_01448

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IN Standard	IN Standard Text	Item Description	Item ID
2.CA.4	Add and subtract within 1000, using models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones, and that sometimes it is necessary to compose or decompose tens or hundreds.	Subtract (student choice, minuends 110 to 199, two-digit subtrahends, no regrouping).	SMMA_LO_01456
		Subtract (student choice, minuends 122 to 199, subtrahends 11 to 88, no regrouping).	SMMA_LO_01457
		Subtract a three-digit multiple of 10 from a number (student choice, minuends 222 to 999, no regrouping).	SMMA_LO_01458
		Subtract (student choice, minuends and subtrahends 110 to 999).	SMMA_LO_01460
		Find the difference of two three-digit numbers.	SMMA_LO_01467
		Find the difference of two three-digit numbers (no regrouping).	SMMA_LO_01469
		Find the difference of two whole numbers (student choice, three-digit minuends, two-digit subtrahends, regrouping from hundreds place to tens place).	SMMA_LO_01471
		Find the difference of two whole numbers (student choice, three-digit minuends, two-digit subtrahends, regrouping from tens place to ones place).	SMMA_LO_01475
		Find the difference of two three-digit numbers (student choice, no regrouping).	SMMA_LO_01477
		Find the difference of two whole numbers (student choice, minuends 201 to 999, subtrahends 11 to 99, regrouping).	SMMA_LO_01479
		Find the difference of two whole numbers (student choice, three-digit minuends, two-digit subtrahends, regrouping from hundreds place to tens place).	SMMA_LO_01481
		Find the difference of two three-digit numbers (student choice, regrouping from the tens to the ones place).	SMMA_LO_01483
		Find the difference of two three-digit numbers (student choice, regrouping from the tens to the ones place).	SMMA_LO_01485
		Find the difference of two three-digit numbers (student choice, regrouping from the tens to the ones place).	SMMA_LO_01487
		Find the difference of two whole numbers (student choice, regrouping from tens place to ones place and hundreds place to tens place).	SMMA_LO_01489
		Find the difference of two three-digit numbers (student choice, regrouping from the tens to the ones place and the hundreds to the tens place).	SMMA_LO_01490
		Subtract a two-digit number from a three-digit number (regrouping from the tens place and hundreds place).	SMMA_LO_01492
2.CA.5	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal groups.	Use repeated addition to multiply (products 2 x 2 to 5 x 5).	SMMA_LO_00852
		Solve addition problems with doubles as prelude to multiplication.	SMMA_LO_00853

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2.CA.6	Show that the order in which two numbers are added (commutative property) and how the numbers are grouped in addition (associative property) will not change the sum. These properties can be used to show that numbers can be added in any order.	Use the commutative and associative properties of addition to find the missing number.	SMMA_LO_01090
2.CA.7	Create, extend, and give an appropriate rule for number patterns using addition and subtraction within 1000.	Count by 2's, 3's, or 10's (11 to 209, not multiples of 2, 3, 10).	SMMA_LO_01056
		Look for a pattern to solve a problem.	SMMA_LO_01276
2.DA.1	Draw a picture graph (with single-unit scale) and a bar graph (with single-unit scale) to represent a data set with up to four choices (What is your favorite color? red, blue, yellow, green). Solve simple put-together, take-apart, and compare problems using information presented in the graphs.	Read and interpret a horizontal or vertical pictograph (four to six items).	SMMA_LO_00138
		Create a vertical bar graph from a table and interpret data in the graph.	SMMA_LO_01130
		Interpret the shorter or taller bar of a vertical bar graph as having fewer or more items.	SMMA_LO_01131
		Identify the two-column vertical bar graph that shows one category has fewer than, the same number as, or more than the other category.	SMMA_LO_01133
		Identify a vertical bar graph that represents data in a table.	SMMA_LO_01134
		Identify the vertical bar graph that shows a strictly increasing or decreasing trend.	SMMA_LO_01135
		Collect, tally, and graph the results generated by a spinner.	SMMA_LO_01144
		Construct a vertical bar graph based on data from a horizontal bar graph.	SMMA_LO_01146
		Identify the number of categories in a vertical bar graph that are less than, equal to, and greater than a given value.	SMMA_LO_01148
		Construct a horizontal bar graph based on data from a vertical bar graph.	SMMA_LO_01150
		Analyze a bar graph to find the number of bars that fall within a given range.	SMMA_LO_01154
		Read and interpret data about tree growth from a bar graph.	SMMA_LO_01302
		Given a bar graph of tree growth, calculate the height a tree grew from one year to another.	SMMA_LO_01303
		R: Identify the table that represents the data in a vertical bar graph.	SMMA_LO_01136
		R: Label the categories of a vertical bar graph based on data from a table.	SMMA_LO_01138
		R: Create a table based on data from a bar graph.	SMMA_LO_01645
2.G.1	Identify, describe, and classify two- and three-dimensional shapes (triangle, square, rectangle, cube, right rectangular prism) according to the number and shape of faces and the number of sides and/or vertices. Draw two-dimensional shapes.	Identify circles or squares by name.	SMMA_LO_00529
		Identify triangles or rectangles by name.	SMMA_LO_00530
		Identify a geometric figure (circle, triangle, rectangle, or square).	SMMA_LO_00531
		Identify circles or squares by name.	SMMA_LO_00544
		Identify triangles or rectangles by name.	SMMA_LO_00546
		Identify 3-, 4-, and 5-sided figures.	SMMA_LO_00550

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2.G.1	Identify, describe, and classify two- and three-dimensional shapes (triangle, square, rectangle, cube, right rectangular prism) according to the number and shape of faces and the number of sides and/or vertices. Draw two-dimensional shapes.	Identify a shape by two positive tests, e.g., red, circle.	SMMA_LO_00565
		Match a geometric figure to its name (circle, triangle, square, or rectangle).	SMMA_LO_00568
		Identify the figure that is not of a given type (rectangle or triangle).	SMMA_LO_00571
		Count the geometric figures in a picture.	SMMA_LO_00572
		Classify and sort three-dimensional solids based on attributes using formal geometric language.	SMMA_LO_02138
2.G.3	Investigate and predict the result of composing and decomposing two- and three-dimensional shapes.	Identify puzzle pieces needed to make a given shape, and then complete the puzzle (4 to 6 pieces).	SMMA_LO_00564
2.G.4	Partition a rectangle into rows and columns of same-size (unit) squares and count to find the total number of same-size squares.	Count squares to find the area (2 to 8 units).	SMMA_LO_00706
2.G.5	Partition circles and rectangles into two, three, or four equal parts; describe the shares using the words halves, thirds, half of, a third of, etc.; and describe the whole as two halves, three thirds, four fourths. Recognize that equal parts of identical wholes need not have the same shape.	Partition shapes into equal parts.	SMMA_LO_02000
2.M.1	Describe the relationships among inch, foot, and yard. Describe the relationship between centimeter and meter.	Identify the reasonable length of an object (inches, feet, and yards).	SMMA_LO_00780
2.M.2	Estimate and measure the length of an object by selecting and using appropriate tools, such as rulers, yardsticks, meter sticks, and measuring tapes to the nearest inch, foot, yard, centimeter and meter.	Measure the length of an object to the nearest inch (2 to 6 inches).	SMMA_LO_00703
		Find the total length of two to four objects laid end to end (2 to 6 inches).	SMMA_LO_00748
		Measure the length of an object to the nearest centimeter (3 to 12 cm).	SMMA_LO_00750
		Measure the length of an object to the nearest inch (1 to 6 inches).	SMMA_LO_00755
		Measure the length of an object to the nearest centimeter (4 to 12 centimeters).	SMMA_LO_00762
		Measure the length of an object in centimeters or inches (whole numbers).	SMMA_LO_00785
		Measure two objects in inches; determine how much longer one object is than the other.	SMMA_LO_02015
		R: Identify a vertical distance (2 to 9 centimeters).	SMMA_LO_00758
		R: Select the appropriate ruler to measure vertical or horizontal lengths.	SMMA_LO_00812

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2.M.3	Understand that the length of an object does not change regardless of the units used. Measure the length of an object twice using length units of different lengths for the two measurements. Describe how the two measurements relate to the size of the unit chosen.	Measure the length of an object in cm and inches; relate the two measurements to the sizes of the units.	SMMA_LO_02003
2.M.4	Estimate and measure volume (capacity) using cups and pints.	Find the capacity of a container (3 to 10 nonstandard units).	SMMA_LO_00754
2.M.5	Tell and write time to the nearest five minutes from analog clocks, using a.m. and p.m. Solve real-world problems involving addition and subtraction of time intervals on the hour or half hour.	Find the time one to five hours before or after a given time (not crossing 12 o'clock).	SMMA_LO_00153
		Compare the difference of two times to a given time (1 to 24 hours, across 12 o'clock).	SMMA_LO_00155
		Find the time one to five hours before or after a given time (across 12 o'clock).	SMMA_LO_00162
		Find the time one to twelve hours and ten to fifty-five minutes from a starting time.	SMMA_LO_00175
		Determine elapsed time (1 to 6 hours, start and end times on the hour, can cross 12 o'clock).	SMMA_LO_00731
		Show time to 5-minute intervals using digital and analog clocks.	SMMA_LO_00744
		Find the elapsed time (1 1/2 to 6 1/2 hours, start times and end times on the hour or half-hour, can cross 12 o'clock).	SMMA_LO_00770
		Identify another way to state the time (minutes before or after the hour).	SMMA_LO_00779
		Solve a problem by identifying the time 1 to 2 hours after a given time (not crossing 12 o'clock).	SMMA_LO_01547
		R: Find the elapsed time (differences from 1 to 6 hours, does not cross 12 o'clock).	SMMA_LO_00142
2.M.6	Describe relationships of time, including: seconds in a minute; minutes in an hour; hours in a day; days in a week; and days, weeks, and months in a year.	R: Enter the missing date on a calendar.	SMMA_LO_00700
		R: Identify the most reasonable quantity for a context (order of magnitude differs).	SMMA_LO_01586
2.M.7	Find the value of a collection of pennies, nickels, dimes, quarters and dollars.	Determine the value of a combination of nickels, dimes, and quarters (values to $5.00).	SMMA_LO_00165
		Identify the number of dollars and dimes that represent a given amount ($1.10 to $3.50).	SMMA_LO_00180
		Identify the coin worth 1, 5, 10, or 25 cents.	SMMA_LO_00702
		Identify the coin equivalent to 5, 10, or 25 pennies.	SMMA_LO_00727
		Enter the amount of money shown (10 to 99 cents).	SMMA_LO_00760
		Identify the set of coins that has greater value (16 to 75 cents in pennies, nickels, dimes, and quarters).	SMMA_LO_00765

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2.M.7	Find the value of a collection of pennies, nickels, dimes, quarters and dollars.	Show a decimal money amount in dollars and coins ($1.00 to $5.00).	SMMA_LO_00774
		Show the given amount of money in coins (25 to 90 cents in pennies, nickels, dimes, and quarters).	SMMA_LO_00778
		Write the value of a set of coins as a decimal amount ($1.00 to $3.20).	SMMA_LO_00784
		Find the total value of a group of quarters, dimes, nickels, and pennies (sums to $1.65).	SMMA_LO_01611
2.NS.1	Count by ones, twos, fives, tens, and hundreds up to at least 1,000 from any given number.	Find a missing number in a sequence, counting by 2's (0 to 10).	SMMA_LO_00966
		Find a missing number in a sequence, counting by 5's (5 to 50).	SMMA_LO_01003
		Count by 2's, 4's, 5's, or 10's (2 to 20, 4 to 40, 5 to 50, 80 to 200).	SMMA_LO_01030
		Find the missing number in a sequence, counting by 5's or 10's.	SMMA_LO_01231
2.NS.2	Read and write whole numbers up to 1,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000.	Identify the word name for a three-digit number.	SMMA_LO_01009
		Identify the number represented by a set of objects (pictorial models of hundreds, tens, and ones; three-digit).	SMMA_LO_01010
		Identify the number, model, word name, or expanded notation that has a different value (three-digit).	SMMA_LO_01018
		Enter the number for a word name (100 to 999).	SMMA_LO_01042
		Find a number equal to 1 to 9 hundreds, 0 to 9 tens, and 0 to 9 ones.	SMMA_LO_01047
2.NS.3	Plot and compare whole numbers up to 1,000 on a number line.	Find a missing number on a number line (0 to 9).	SMMA_LO_00961
		Find a number that is one fewer or one greater than a given number (1 to 9).	SMMA_LO_00962
		Identify two numbers within a range (1 to 9).	SMMA_LO_00963
		Identify a number on a number line between two given numbers (1 to 9).	SMMA_LO_00993
		Find a missing number for a point on a number line (two-digit).	SMMA_LO_00996
		Find a number between two given numbers (1 to 999).	SMMA_LO_01020
		Identify four numbers that are in consecutive order (three-digit).	SMMA_LO_01021
		Identify whole numbers on a number line that satisfy the inequality (0 to 10).	SMMA_LO_01023
		Identify a number that is between two numbers, or before, after, or closer to a number (101 to 999).	SMMA_LO_01027
		Identify four numbers that are in consecutive order (three-digit).	SMMA_LO_01029
		Enter a number on a partially numbered number line (100 to 999).	SMMA_LO_01037

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2.NS.6	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones). Understand that 100 can be thought of as a group of ten tens — called a "hundred." Understand that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	Find a number equal to 1 to 9 hundreds.	SMMA_LO_01007
		Find the number of hundreds equivalent to a multiple of 100 (100 to 900).	SMMA_LO_01008
		Use base-ten blocks to show a number (three-digit).	SMMA_LO_01012
		Enter a three-digit number in a place-value chart (base-ten block models, three-digit).	SMMA_LO_01013
		Identify a number with a given digit in the ones, tens, or hundreds place.	SMMA_LO_01014
		Find a number equal to 1 to 9 hundreds, 0 to 9 tens, and 0 to 9 ones.	SMMA_LO_01015
		Enter a three-digit number in a place-value chart (base-ten block models, three-digit).	SMMA_LO_01025
		Given a number (1-9) of groups of 10 objects, determine how many more groups of 10 objects are needed to make a hundred.	SMMA_LO_02011
2.NS.7	Use place value understanding to compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	Compare sums (two-digit addends, multiples of 10).	SMMA_LO_00334
		Identify the greatest or least number (three-digit).	SMMA_LO_01019
		Identify the greatest or least number (three-digit).	SMMA_LO_01026
		Identify a set of numbers between two numbers, or less than or greater than a given number (101 to 999).	SMMA_LO_01068
		Identify the value that is greater than one number and less than another in context.	SMMA_LO_01554
3.AT.1	Solve real-world problems involving addition and subtraction of whole numbers within 1000 (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	Solve an addition problem using data in a table (sums 100 to 198).	SMMA_LO_01595
		Solve a problem in context that involves finding the difference of 2 three-digit numbers.	SMMA_LO_01610
		R: Estimate the sum by rounding to the nearest hundred (three-digit addends).	SMMA_LO_01675
3.AT.2	Solve real-world problems involving whole number multiplication and division within 100 in situations involving equal groups, arrays, and measurement quantities (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	Identify the method to solve a multiplication problem with extra information.	SMMA_LO_01267
		Identify the method to solve a division problem with extra information.	SMMA_LO_01268
		Identify the missing information needed to solve a multiplication problem in context; then solve the problem.	SMMA_LO_01283
		Make a picture to solve a partitive division problem (dividends to 20).	SMMA_LO_01564
		Make a picture to solve a quotitive division problem (dividends to 20).	SMMA_LO_01565
		Identify and solve an expression that represents a multiplication problem in context (model shown, products to 32).	SMMA_LO_01570
		Find twice the amount of the money shown (products to 20).	SMMA_LO_01571
		Solve a multiplication problem in context (counting feedback, products 2 × 2 to 5 × 5).	SMMA_LO_01572
		Solve a multiplication problem in context (repeated addition feedback, products 2 x 2 to 5 x 5).	SMMA_LO_01578

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3.AT.2	Solve real-world problems involving whole number multiplication and division within 100 in situations involving equal groups, arrays, and measurement quantities (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	Solve a multiplication problem in context with extra information.	SMMA_LO_01589
		Identify and solve an expression that represents a multiplication problem in context (products 3 x 4 to 9 x 9).	SMMA_LO_01590
		Solve a problem using data in a table (twice, half, three times, or four times an amount).	SMMA_LO_01593
		Solve a one-step division problem (math facts 2 × 2 to 9 × 9).	SMMA_LO_01600
		Identify the expression that represents a division problem in context; then solve the problem (dividends 12 to 81).	SMMA_LO_01605
		Use repeated subtraction to solve a division problem (dividends 4 to 24).	SMMA_LO_01664
		R: Identify the number sentence that represents a division problem in context (model shown, dividends to 20).	SMMA_LO_01569
3.AT.3	Solve two-step real-world problems using the four operations of addition, subtraction, multiplication and division (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	Identify the missing information needed to solve a two-step problem; then solve the problem.	SMMA_LO_01274
		Identify an expression that can be used to solve a problem (inverse operations).	SMMA_LO_01275
		Use a picture to solve an addition problem with three addends.	SMMA_LO_01286
		Find the missing information needed to solve a problem; then solve.	SMMA_LO_01293
		Make a picture to solve a multistep addition and multiplication problem in context.	SMMA_LO_01592
		Solve a two-step multiplication and addition problem in context.	SMMA_LO_01633
		R: Solve for a, b, or c in a + b + c = d (sums 10 to 19).	SMMA_LO_00335
		R: Solve for d in a + b + c = d (one-digit addends, sums 20 to 27).	SMMA_LO_00339
		R: Identify a number sentence that can be used to solve an addition, a subtraction, or a multiplication problem (one- or two-digit).	SMMA_LO_01254
		R: Identify a number sentence that could be used to solve a multiplication problem.	SMMA_LO_01270
		R: Identify extra information in a problem.	SMMA_LO_01272
		R: Work backward to solve a two-step problem.	SMMA_LO_01288
		R: Choose a method to solve a two-step problem.	SMMA_LO_01289
3.AT.4	Interpret a multiplication equation as equal groups (e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each). Represent verbal statements of equal groups as multiplication equations.	Identify and solve an expression that represents a multiplication problem in context (model shown, products to 32).	SMMA_LO_01570
		Identify and solve an expression that represents a multiplication problem in context (products 3 x 4 to 9 x 9).	SMMA_LO_01590

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3.AT.5	Determine the unknown whole number in a multiplication or division equation relating three whole numbers.	Find the missing dividend or divisor (combinations 4 x 4 to 7 x 7).	SMMA_LO_00285
		Complete fact families with four facts (products 2 x 3 to 8 x 9).	SMMA_LO_00344
		Solve for c in a × b = c (products 1 × 2 to 5 × 9).	SMMA_LO_00346
		Solve for a or b in a x b = c (products 1 x 2 to 5 x 9).	SMMA_LO_00351
		Solve for a or b in a ÷ b = c (combinations 1 × 2 to 5 × 5).	SMMA_LO_00352
		Solve for c in a × b = c (products 6 × 2 to 9 × 12).	SMMA_LO_00353
		Solve for a or b in a ÷ b = c (combinations 6 × 6 to 9 × 9).	SMMA_LO_00354
		Multiply whole numbers (products to 5 x 5).	SMMA_LO_00855
		Find the missing factor (products to 5 x 5).	SMMA_LO_00856
		Multiply whole numbers (products 6 x 1 to 9 x 5).	SMMA_LO_00857
		Find the missing factor (products to 5 x 5).	SMMA_LO_00858
		Multiply whole numbers displayed horizontally (products 1 x 6 to 5 x 9).	SMMA_LO_00859
		Find the missing factor (products 1 x 6 to 5 x 9).	SMMA_LO_00860
		Multiply whole numbers (products 1 x 2 to 5 x 5).	SMMA_LO_00861
		Find the missing factor (products 1 x 6 to 5 x 9).	SMMA_LO_00862
		Multiply whole numbers (products 1 x 6 to 5 x 9).	SMMA_LO_00863
		Find the missing factor (products 1 x 6 to 9 x 5).	SMMA_LO_00864
		Multiply whole numbers (products 6 x 2 to 9 x 5).	SMMA_LO_00865
		Find the missing factor (products 6 x 1 to 9 x 5).	SMMA_LO_00866
		Multiply whole numbers (products 6 x 6 to 9 x 9).	SMMA_LO_00867
		Multiply whole numbers displayed horizontally (products 6 x 6 to 9 x 9).	SMMA_LO_00868
		Find the missing factor (products 6 x 6 to 9 x 9).	SMMA_LO_00873
		Find the missing factor (products 6 x 6 to 9 x 9).	SMMA_LO_00877
3.AT.6	Create, extend, and give an appropriate rule for number patterns using multiplication within 1000.	Determine the output of a one-function machine, given an input and sample inputs and outputs (combinations 2 x 2 to 9 x 9).	SMMA_LO_00358
		Identify if the sum, difference, or product of two numbers is even or odd.	SMMA_LO_01086
		Find a missing number in a geometric sequence (first number 1 to 5, factors 2 to 5).	SMMA_LO_01117
		Describe the relationship between two sets of numbers in a relation or function using multiplication, addition, or subtraction.	SMMA_LO_01653
		Extend a geometric pattern.	SMMA_LO_01691

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3.AT.6	Create, extend, and give an appropriate rule for number patterns using multiplication within 1000.	R: Identify an even or odd number (2 to 99).	SMMA_LO_01050
		R: Identify the expression whose sum is odd or even (basic facts).	SMMA_LO_01053
		R: Identify odd or even numbers (two- and three-digit).	SMMA_LO_01054
3.C.1	Add and subtract whole numbers fluently within 1000.	Add two addends (100 and a three-digit number, sums 200 to 900).	SMMA_LO_00057
		Add two addends displayed horizontally (multiples of 10, sums 100 to 180, regrouping).	SMMA_LO_00068
		Find the missing addend in a number sentence (two addends, sums 100 to 199, regrouping).	SMMA_LO_00086
		Find the missing addend in an number sentence (a two-digit and a three-digit addend, multiples of 10, sums 110 to 990).	SMMA_LO_00088
		Solve for a or b in a + b = c (sums 101 to 199, no regrouping).	SMMA_LO_00345
		Find a number that is one fewer, one greater, just before, or just after a three-digit number.	SMMA_LO_01016
		Subtract 100 from a three-digit number presented in a sentence.	SMMA_LO_01459
		R: Estimate the sum by rounding to the nearest 10 (two-digit addends).	SMMA_LO_01615
		R: Estimate the difference (three-digit, differences 100 to 800).	SMMA_LO_01676
3.C.2	Represent the concept of multiplication of whole numbers with the following models: equal-sized groups, arrays, area models, and equal "jumps" on a number line. Understand the properties of 0 and 1 in multiplication.	Use repeated addition to multiply (products 2 x 2 to 5 x 5).	SMMA_LO_00852
		Solve addition problems with doubles as prelude to multiplication.	SMMA_LO_00853
		Solve addition and multiplication problems (products 2 × 6 to 2 × 9).	SMMA_LO_00854
		Find the missing numbers on a number line counting by 3's or 9's (3 to 81).	SMMA_LO_01034
		Make a picture to solve a multiplication problem (basic facts).	SMMA_LO_01237
		Identify a picture that represents a multiplication problem (basic facts).	SMMA_LO_01246
		Identify four arrays for a given product (products 6 to 30).	SMMA_LO_01858
		Create arrays for a given product (products 6 to 30).	SMMA_LO_01859
3.C.3	Represent the concept of division of whole numbers with the following models: partitioning, sharing, and an inverse of multiplication. Understand the properties of 0 and 1 in division.	Divide using graphic models (combinations to 5 x 5).	SMMA_LO_00279
		Make a picture to solve a division problem (math facts).	SMMA_LO_01238
		Identify a picture that represents a division problem (math facts).	SMMA_LO_01245
		Represent a division problem as an unknown-factor problem; then find the missing factor.	SMMA_LO_02039

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3.C.4	Interpret whole-number quotients of whole numbers (e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each).	Divide using graphic models (combinations to 5 x 5).	SMMA_LO_00279
		Make a picture to solve a division problem (math facts).	SMMA_LO_01238
		Identify a picture that represents a division problem (math facts).	SMMA_LO_01245
3.C.5	Multiply and divide within 100 using strategies, such as the relationship between multiplication and division (e.g., knowing that 8 x 5 = 40, one knows 40 ÷ 5 = 8), or properties of operations.	Multiply a two-digit number by a one-digit number (products 10 x 1 to 12 x 4).	SMMA_LO_00869
		Multiply whole numbers (student choice, products 10 x 2 to 15 x 5).	SMMA_LO_00870
		Multiply whole numbers (student choice, products 16 x 2 to 19 x 5).	SMMA_LO_00872
3.C.6	Demonstrate fluency with multiplication facts and corresponding division facts of 0 to 10.	Divide using basic facts (combinations 5 x 5).	SMMA_LO_00280
		Divide using basic facts (combinations 2 x 6 to 9 x 5).	SMMA_LO_00282
		Divide (combinations 6 x 6 to 9 x 9).	SMMA_LO_00284
		Divide (combinations 2 x 10 to 5 x 12).	SMMA_LO_00286
		Divide (combinations 5 x 9 to 6 x 12).	SMMA_LO_00288
		Divide (combinations 2 x 13 to 5 x 19, no remainder).	SMMA_LO_00305
		Find the quotient (dividends 6 × 6 to 9 × 9).	SMMA_LO_00349
		Compare products (products 2 x 2 to 9 x 9).	SMMA_LO_00350
		Compare quotients (combinations 2 × 2 to 9 × 9).	SMMA_LO_00355
		R: Identify the missing operation in a number sentence (all operations).	SMMA_LO_01074
3.DA.1	Create scaled picture graphs, scaled bar graphs, and frequency tables to represent a data set—including data collected through observations, surveys, and experiments—with several categories. Solve one- and two-step "how many more" and "how many less" problems regarding the data and make predictions based on the data.	Read and interpret a horizontal pictograph with a scale of 2 (five items).	SMMA_LO_00140
		Make a pictograph from a set of data.	SMMA_LO_00146
		Read and interpret a pictograph with a scale of 2, 5 or 10.	SMMA_LO_01158
		Compare the amounts of two rows in a pictograph whose scale is 2, 5, or 10 items per picture.	SMMA_LO_01172
		Compare the amounts of two rows in a pictograph whose scale is 2, 5, or 10 items per picture.	SMMA_LO_01174
		Find the amount of increase or decrease between two points in a line graph.	SMMA_LO_01178
		Complete and interpret a pictograph.	SMMA_LO_01207
		Read a bar graph and answer questions about tree growth over time.	SMMA_LO_01304
		Create a bar graph using data from a chart of values.	SMMA_LO_01696
		Create a line graph using data from a table.	SMMA_LO_01697
		Create a bar graph.	SMMA_LO_01769
		Create a line graph.	SMMA_LO_01771
		R: Read and interpret a line graph.	SMMA_LO_01206

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IN Standard	IN Standard Text	Item Description	Item ID
3.DA.2	Generate measurement data by measuring lengths with rulers to the nearest quarter of an inch. Display the data by making a line plot, where the horizontal scale is marked off in appropriate units, such as whole numbers, halves, or quarters.	Choose a title for a line plot and label the units.	SMMA_LO_01643
3.G.1	Identify and describe the following: cube, sphere, prism, pyramid, cone, and cylinder.	Identify a geometric solid (cylinder, pyramid, or rectangular prism).	SMMA_LO_00616
		Identify geometric solids (cones, cubes, cylinders, pyramids, rectangular prisms, spheres).	SMMA_LO_00622
3.G.2	Understand that shapes (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize and draw rhombuses, rectangles, and squares as examples of quadrilaterals. Recognize and draw examples of quadrilaterals that do not belong to any of these subcategories.	Identify the quadrilaterals in a set of figures.	SMMA_LO_00615
3.G.3	Identify, describe and draw points, lines and line segments using appropriate tools (e.g., ruler, straightedge, and technology), and use these terms when describing two-dimensional shapes.	Identify line segments in three- and four-sided figures.	SMMA_LO_00579
		Identify line segments.	SMMA_LO_00605
		Count the points of intersection of two or more lines (0 to 5 intersection points).	SMMA_LO_00635
		Draw a line segment using a ruler (to 1/4 inch and 0.5 cm).	SMMA_LO_00800
3.G.4	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole (1/2, 1/3, 1/4, 1/6, 1/8).	Identify a model that represents a fraction (halves, thirds, fourths).	SMMA_LO_00404
		Identify a fraction that represents a model (halves, thirds, fourths).	SMMA_LO_00405
		Identify the set of shapes that represents a fraction (halves, thirds, fourths).	SMMA_LO_00406
		Identify the figure showing a fractional part shaded (halves, thirds, fourths).	SMMA_LO_00409
		Identify the fraction representing a shaded region (halves, thirds, fourths).	SMMA_LO_00410
		Identify the picture that shows one number is one-half of another number.	SMMA_LO_00418
		Identify the figure showing a fraction of a region shaded (halves to eighths).	SMMA_LO_00420
		Identify a fraction representing the shaded part (halves to eighths).	SMMA_LO_00421
		Enter the fraction representing the shaded amount (halves to eighths).	SMMA_LO_00422
		Draw one to two segments to divide a figure into two to four congruent parts.	SMMA_LO_00640
		R: Identify the model that is divided into equal parts (2 to 8 parts).	SMMA_LO_00400

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IN Standard	IN Standard Text	Item Description	Item ID
3.G.4	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole (1/2, 1/3, 1/4, 1/6, 1/8).	R: Count the number of equal parts in a fractional model (2 to 8 parts).	SMMA_LO_00402
		R: Count the fractional parts and total number of parts in a region (halves, thirds, fourths).	SMMA_LO_00403
		R: Identify the figure divided into equal parts (halves to eighths).	SMMA_LO_00417
		R: Determine whether two to six segments divide a figure into congruent parts.	SMMA_LO_00634
3.M.1	Estimate and measure the mass of objects in grams (g) and kilograms (kg) and the volume of objects in quarts (qt), gallons (gal), and liters (l). Add, subtract, multiply, or divide to solve one-step real-world problems involving masses or volumes that are given in the same units (e.g., by using drawings, such as a beaker with a measurement scale, to represent the problem).	Add nonstandard units of capacity (sums 2 to 8).	SMMA_LO_00739
		Subtract nonstandard units of capacity (differences 0 to 3).	SMMA_LO_00742
		Add units of capacity (pints, sums 2 to 6).	SMMA_LO_00764
		Read weights from a chart; choose two weights that equal a given total (sums to 1,500).	SMMA_LO_01301
		R: Choose the appropriate customary units of liquid measure (cups, quarts, and gallons).	SMMA_LO_01674
3.M.2	Choose and use appropriate units and tools to estimate and measure length, weight, and temperature. Estimate and measure length to a quarter-inch, weight in pounds, and temperature in degrees Celsius and Fahrenheit.	Select the appropriate standard unit of measurement for length, capacity, and weight (customary).	SMMA_LO_00729
		Identify the tool for a particular use (thermometer, scale, clock).	SMMA_LO_00761
		Select the appropriate standard unit of measurement for length, capacity, and weight (metric).	SMMA_LO_00767
		R: Read a thermometer to the nearest 10 degrees (Fahrenheit).	SMMA_LO_00768
3.M.3	Tell and write time to the nearest minute from analog clocks, using a.m. and p.m., and measure time intervals in minutes. Solve real-world problems involving addition and subtraction of time intervals in minutes.	Show time to the minute using digital and analog clocks.	SMMA_LO_00771
		Show time 1 to 11 hours and 5 to 55 minutes before or after the time shown (analog and digital clocks).	SMMA_LO_00775
		Find the time 5 to 50 minutes after the time shown (analog clock).	SMMA_LO_00798
		Given the ending time and the elapsed time, find the starting time.	SMMA_LO_01613
		Set the digital clock to match the time on the analog clock to the exact minute.	SMMA_LO_01670
		Show time 1 to 11 hours and 5 to 55 minutes before or after the time shown (analog and digital clocks).	SMMA_LO_02155
3.M.4	Find the value of any collection of coins and bills. Write amounts less than a dollar using the ¢ symbol and write larger amounts using the $ symbol in the form of dollars and cents (e.g., $4.59). Solve real-world problems to determine whether there is enough money to make a purchase.	Write the value of a set of dimes in dollar form ($1.10 to $3.90).	SMMA_LO_00183
		Identify items that can be purchased for a nickel.	SMMA_LO_01541
		Solve a subtraction problem involving coins (two-digit numbers, no regrouping).	SMMA_LO_01579
		Solve a division problem about money with extra information (round quotient to the nearest whole number).	SMMA_LO_01585
		Determine the number of dollar bills needed to buy three to five items.	SMMA_LO_01623

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IN Standard	IN Standard Text	Item Description	Item ID
3.M.5	Find the area of a rectangle with whole-number side lengths by modeling with unit squares, and show that the area is the same as would be found by multiplying the side lengths. Identify and draw rectangles with the same perimeter and different areas or with the same area and different perimeters.	Count squares to find the area (2 to 8 units).	SMMA_LO_00706
		Find the sum of the areas of two figures (sums 3 to 8, nonstandard units).	SMMA_LO_00752
		Find the area of a rectangle (5 to 25 square centimeters).	SMMA_LO_00773
		Identify the figure in a set with the least or greatest area (figures are made up of squares).	SMMA_LO_00776
		Count squares and half squares to find the area of a figure in square centimeters.	SMMA_LO_00783
		Identify a figure with a given area on a geoboard (4 to 15 square units).	SMMA_LO_00802
		Identify examples of relationships between area and perimeter.	SMMA_LO_00850
		Find the area of a plane figure made up of square units and halves of square units.	SMMA_LO_02028
		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
		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
		R: Identify a unit square and what attribute it is used to measure.	SMMA_LO_02027
3.M.6	Multiply side lengths to find areas of rectangles with whole-number side lengths to solve real-world problems and other mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	Identify equivalent arrays with different factors.	SMMA_LO_01715
		Use partial sums and arrays to solve a two-digit by a one-digit multiplication problem.	SMMA_LO_01716
		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
		R: Find the area of a rectangle (36 to 144 customary or metric square units).	SMMA_LO_00173
3.M.7	Find perimeters of polygons given the side lengths or by finding an unknown side length.	Find the perimeter of a rectangle (24 to 48 customary or metric units).	SMMA_LO_00169
		Given the length of one side of a rectangle, measure another side, and then find the perimeter.	SMMA_LO_00788
		Given the lengths of all sides, find the perimeter of a rectangle.	SMMA_LO_00821
		R: Count to find the perimeter (3 to 9 nonstandard units).	SMMA_LO_00708
		R: Identify the shape with the greater perimeter (3 to 11 nonstandard units).	SMMA_LO_00734
		R: Find the perimeter of a figure (3 to 10 nonstandard units).	SMMA_LO_00757
		R: Identify the expression for the perimeter of a figure.	SMMA_LO_00818

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IN Standard	IN Standard Text	Item Description	Item ID
3.NS.1	Read and write whole numbers up to 10,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 10,000.	Show a four-digit number with base-ten blocks.	SMMA_LO_01032
		Identify a number with a given digit in the ones, tens, hundreds, or thousands place.	SMMA_LO_01033
		Identify the expanded notation of a four-digit number.	SMMA_LO_01038
		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
		Enter the number for a word name (1000 to 9999).	SMMA_LO_01065
		Identify the digits in the period (hundreds, thousands, millions, and billions).	SMMA_LO_01083
3.NS.2	Compare two whole numbers up to 10,000 using >, =, and < symbols.	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
3.NS.3	Understand a fraction, 1/b, as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction, a/b, as the quantity formed by a parts of size 1/b. [In grade 3, limit denominators of fractions to 2, 3, 4, 6, 8.]	Identify the figure showing the fraction of a set shaded (halves, thirds, fourths).	SMMA_LO_00413
		Identify the fraction representing shaded items in a set (halves, thirds, fourths).	SMMA_LO_00414
		Identify a fractional portion of a set (halves, thirds, fourths).	SMMA_LO_00415
		Solve a problem by finding the fractional amount of a set (halves to eighths).	SMMA_LO_00424
		Identify a fractional portion of a set (halves to eighths).	SMMA_LO_00425
		Partition shapes into equal parts.	SMMA_LO_02000
		Model a fraction a/b by filling in a out of b sections in a fraction model.	SMMA_LO_02034
		R: Match the word name of a fraction to a fraction (halves, thirds, fourths).	SMMA_LO_00411
		R: Count the fractional parts and total number of parts in a set (halves, thirds, fourths).	SMMA_LO_00412
		R: Match the word name of the fraction to the fraction (halves to eighths).	SMMA_LO_00416
		R: Count shaded parts and the total number of parts (halves to eighths).	SMMA_LO_00419
		R: Count the shaded and total number of elements in a set (halves to eighths).	SMMA_LO_00423
3.NS.4	Represent a fraction, 1/b, on a number line by defining the interval from 0 to 1 as the whole, and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line.	Represent a unit fraction 1/b by partitioning a number line and then finding 1/b on it.	SMMA_LO_02148
3.NS.5	Represent a fraction, a/b, on a number line by marking off lengths 1/b from 0. Recognize that the resulting interval has size a/b, and that its endpoint locates the number a/b on the number line.	Enter the missing fraction on a number line (halves to eighths).	SMMA_LO_00430
		Identify a fraction for a given point on a number line divided into tenths, twelfths, or sixteenths.	SMMA_LO_00431

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3.NS.6	Understand two fractions as equivalent (equal) if they are the same size, based on the same whole or the same point on a number line.	Model equivalent fractions; identify equivalent fractions on a number line.	SMMA_LO_02035
3.NS.7	Recognize and generate simple equivalent fractions (e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent (e.g., by using a visual fraction model).	Using models, find equivalent fractions (halves to sixteenths).	SMMA_LO_00433
		Identify two equivalent fractions for 1/2.	SMMA_LO_01708
3.NS.8	Compare two fractions with the same numerator or the same denominator by reasoning about their size based on the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions (e.g., by using a visual fraction model).	Using a number line, compare fractions (like denominators, halves to sixteenths).	SMMA_LO_00434
		Using models, compare fractions (unlike denominators, numerators equal to one, halves to sixteenths).	SMMA_LO_00435
		Compare fractions (like denominators, thirds to sixteenths).	SMMA_LO_00447
3.NS.9	Use place value understanding to round 2- and 3-digit whole numbers to the nearest 10 or 100.	Round a two-digit number to the nearest ten.	SMMA_LO_01028
		Round a three-digit number to the nearest hundred.	SMMA_LO_01036
		Identify the best estimate for a sum of two numbers (two-digit addends, round to the nearest 10).	SMMA_LO_01052
		Round a two-digit or three-digit number to the nearest ten.	SMMA_LO_01059
		Determine the reasonableness of a sum or difference (two- and three-digit numbers).	SMMA_LO_01259
		Estimate the number of objects to the nearest ten (21 to 49 objects).	SMMA_LO_01548
		Round two-digit numbers to the nearest ten.	SMMA_LO_01647
		Round a two-digit number to the nearest ten (hundreds chart).	SMMA_LO_01648
		Round a two-digit number to the nearest ten.	SMMA_LO_01649
		Round a three-digit number to the nearest hundred.	SMMA_LO_01650
		Round a three-digit number to the nearest hundred.	SMMA_LO_01651
		Round a three-digit number to the nearest hundred.	SMMA_LO_01652
4.AT.1	Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	Identify all the towns with temperatures below 32 degrees Fahrenheit on a weather map.	SMMA_LO_01311
		Predict the effect of changing temperatures on the weather.	SMMA_LO_01312
		R: Estimate the difference of 2 four-digit numbers to the nearest thousand.	SMMA_LO_01614
4.AT.2	Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve real-world and other mathematical problems.	Find the missing factor (products 2 x 2 to 12 x 12).	SMMA_LO_00881
		Find the missing factor (products 20 x 20 to 90 x 90, multiples of 10).	SMMA_LO_00893
		Solve a division problem in context by rounding the quotient to the next whole number (model shown).	SMMA_LO_01573

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4.AT.3	Interpret a multiplication equation as a comparison (e.g., interpret 35 = 5 × 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
		Interpret a multiplication equation by writing a comparison statement.	SMMA_LO_02025
4.AT.4	Solve real-world problems with whole numbers 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. [In grade 4, division problems should not include a remainder.]	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
4.AT.5	Solve real-world problems involving addition and subtraction of fractions referring to the same whole and having common 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
		Add mixed numbers with like denominators in context; simplify if necessary.	SMMA_LO_01624
		Use addition to find an equivalent fraction for 1/2.	SMMA_LO_01706
		Add fractions with like denominators (no simplifying).	SMMA_LO_01709
		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
4.AT.6	Understand that an equation, such as y = 3x + 5, is a rule to describe a relationship between two variables and can be used to find a second number when a first number is given. Generate a number pattern that follows a given rule.	Identify an expression to describe the pattern generated by a table.	SMMA_LO_01741
4.C.1	Add and subtract multi-digit whole numbers fluently using a standard algorithmic approach.	Add two addends (student choice, three-digit addends, sums 1000 to 1899, regrouping).	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

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IN Standard	IN Standard Text	Item Description	Item ID
4.C.1	Add and subtract multi-digit whole numbers fluently using a standard algorithmic approach.	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
		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
		R: Estimate the sum by rounding to the nearest hundred (three-digit addends).	SMMA_LO_01621

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4.C.2	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. Describe the strategy and explain the reasoning.	Multiply whole numbers (student choice, products 10 x 6 to 15 x 9).	SMMA_LO_00874
		Multiply whole numbers (student choice, products 16 x 6 to 19 x 9).	SMMA_LO_00876
		Multiply whole numbers (student choice, products 20 x 2 to 90 x 9, multiples of 10).	SMMA_LO_00878
		Multiply whole numbers (student choice, products 21 x 2 to 99 x 9).	SMMA_LO_00880
		Multiply whole numbers (student choice, products 100 x 2 to 990 x 9, multiples of 10).	SMMA_LO_00882
		Multiply whole numbers (student choice, products 10 x 10 to 15 x 90, multiples of 10).	SMMA_LO_00884
		Multiply whole numbers (products 2 x 20 to 90 x 9, multiples of 10).	SMMA_LO_00885
		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
		Multiply whole numbers (student choice, products 1000 x 2 to 9999 x 9).	SMMA_LO_00892
		Multiply whole numbers (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 whole numbers (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
		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
		R: Estimate the product by rounding the second factor.	SMMA_LO_01603
4.C.3	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. Describe the strategy and explain the reasoning.	Divide (combinations 2 x 20 to 5 x 90).	SMMA_LO_00291
		Divide using the long division algorithm (one-digit divisor, remainder).	SMMA_LO_00292
		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
		Divide using the long division algorithm (four-digit dividend, one-digit divisor, remainder).	SMMA_LO_00300
		Find the quotient of b divided by a (combinations 6 x 13 to 9 x 19).	SMMA_LO_00312
		Estimate the quotient to the nearest ten (three-digit dividends, one-digit divisors).	SMMA_LO_00314
		R: Divide using the long division algorithm (one-digit divisor, no remainder).	SMMA_LO_00290

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4.C.4	Multiply fluently within 100.	Multiply whole numbers (products 10 x 2 to 12 x 12).	SMMA_LO_00871
		Multiply whole numbers (products 2 x 12 to 12 x 12).	SMMA_LO_00875
		Multiply whole numbers (products 13 x 1 to 19 x 5).	SMMA_LO_00894
4.C.5	Add and subtract fractions with common denominators. Decompose a fraction into a sum of fractions with common denominators. Understand addition and subtraction of fractions as combining and separating parts referring to the same whole.	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
		Determine addition expressions that are equivalent to a given fraction.	SMMA_LO_02146
4.C.6	Add and subtract mixed numbers with common 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
		Subtract mixed numbers; simplify if necessary (like denominators).	SMMA_LO_00485
4.C.7	Show how the order in which two numbers are multiplied (commutative property) and how numbers are grouped in multiplication (associative property) will not change the product. Use these properties to show that numbers can by multiplied in any order. Understand and use the distributive property.	Apply the Commutative Property of Multiplication as a strategy to multiply and divide whole numbers.	SMMA_LO_02036
		Apply the Associative Property of Multiplication as a strategy to multiply whole numbers.	SMMA_LO_02037
		Apply the Distributive Property as a strategy to multiply whole numbers.	SMMA_LO_02038
4.DA.2	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using data displayed in line plots.	Analyze a line plot to find the total number of items that fall at, above, or below a given value.	SMMA_LO_01156
4.DA.3	Interpret data displayed in a circle graph.	Select a circle graph whose sectors are in the same proportions as the data displayed in a given table.	SMMA_LO_01160
		Select a table that contains data that are in the same proportions as the sectors of a graph.	SMMA_LO_01162
4.G.1	Identify, describe, and draw parallelograms, rhombuses, and trapezoids using appropriate tools (e.g., ruler, straightedge and technology).	Identify parallelograms, rhombuses, and trapezoids.	SMMA_LO_00620
		In a set of quadrilaterals, identify all the parallelograms.	SMMA_LO_00621
		Identify the quadrilaterals that are trapezoids or rhombuses.	SMMA_LO_00659
4.G.2	Recognize and draw lines of symmetry in two-dimensional figures. Identify figures that have 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

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IN Standard	IN Standard Text	Item Description	Item ID
4.G.2	Recognize and draw lines of symmetry in two-dimensional figures. Identify figures that have lines of symmetry.	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
4.G.3	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint.	Match the labeled angles to the correct angle notation.	SMMA_LO_00617
4.G.4	Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures.	Match the labeled angles to the correct angle notation.	SMMA_LO_00617
		Identify parallel and perpendicular streets on a map.	SMMA_LO_00619
		Identify an angle as acute, right, or obtuse.	SMMA_LO_00628
		Identify right, acute, and obtuse angles in polygons.	SMMA_LO_00630
		Draw parallel, perpendicular, or intersecting lines on a grid.	SMMA_LO_00638
		Identify the pairs of parallel line segments in a geometric drawing.	SMMA_LO_00639
		Classify and sort two-dimensional geometric figures by properties and attributes.	SMMA_LO_01728
		R: Predict whether or not lines will intersect.	SMMA_LO_00598
		R: Determine whether an angle is larger than, smaller than, or the same size as a right angle.	SMMA_LO_00624
4.G.5	Classify triangles and quadrilaterals based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles (right, acute, obtuse).	Identify acute, obtuse, and right triangles.	SMMA_LO_00655
		Identify all triangles of a particular class (acute, right, or obtuse).	SMMA_LO_01774
4.M.1	Measure length to the nearest quarter-inch, eighth-inch, and millimeter.	Measure the length of a bar to the nearest 1/4 inch or 0.5 cm.	SMMA_LO_00822
4.M.2	Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	Express yards and feet as an equivalent number of feet, or feet and inches as an equivalent number of inches.	SMMA_LO_00166
		Add metric measurements with unlike units and express the sum in terms of the smaller unit.	SMMA_LO_00168
		Identify the reasonable weight of an object (ounces, pounds, and tons).	SMMA_LO_00787
		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
		Compare unlike customary units of weight and identify the correct statement (ounces and pounds).	SMMA_LO_00801
		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 and kilograms).	SMMA_LO_00807

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4.M.2	Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	Identify the reasonable capacity of an object (milliliters and liters).	SMMA_LO_00811
		Find a fraction of an hour in minutes (1/4, 1/3, 1/2, 2/3, or 3/4 hour).	SMMA_LO_00817
		Compare unlike metric units and identify the correct statement (mm, cm, m, km; mL, L; mg, g, kg).	SMMA_LO_00820
		Convert units of time (seconds, minutes, hours, days, weeks, months, and years).	SMMA_LO_00837
		Convert hours to minutes.	SMMA_LO_01672
		Identify distances or objects that would be measured in cm, m, or km.	SMMA_LO_01703
		Identify the appropriate unit of measure (l, kl, g, kg, m, km).	SMMA_LO_01704
		Identify the appropriate unit of weight.	SMMA_LO_01730
		Choose the appropriate unit of capacity (ounce, cup, pint, quart, and gallon).	SMMA_LO_01864
4.M.3	Use the four operations (addition, subtraction, multiplication and division) to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	Make a picture to find the change received from a purchase (change back from $1.00).	SMMA_LO_01583
		Make a picture to solve a multiplication problem involving total cost (2 to 5 items, 5, 10, or 15 cents each).	SMMA_LO_01584
		Estimate the total cost of four items by rounding to the nearest dollar (sums to $15.00).	SMMA_LO_01591
		Solve an addition problem in context (3 three-digit addends, regrouping).	SMMA_LO_01597
		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
		Find the change from one dollar for two to four items (each 10, 15, or 20 cents).	SMMA_LO_01609
		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_01654
		R: Identify the fraction of a dollar a coin is worth (penny to half-dollar).	SMMA_LO_00809
		R: Determine if the perimeter, area, or volume is needed to solve the problem.	SMMA_LO_00826
4.M.4	Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems involving shapes. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems involving shapes.	Using a grid, find the area of a simple figure (8 to 60 nonstandard units).	SMMA_LO_00786
		Find the area of a rectangle using a formula.	SMMA_LO_00810
		Identify rectangles that have equal areas, but different dimensions.	SMMA_LO_00823
		Find the area of an irregular figure displayed on a grid (12 to 50 square units).	SMMA_LO_01280
		Find the area of a rectilinear figure in a context by decomposing it into two rectangles.	SMMA_LO_02032

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4.M.6	Measure angles in whole-number degrees using appropriate tools. Sketch angles of specified measure.	Given the measure of an angle (initial side at 0 degrees, measure 10 to 180 degrees).	SMMA_LO_00631
		Use a protractor to measure an angle.	SMMA_LO_00636
		Measure an angle using the appropriate protractor.	SMMA_LO_00646
		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 angles in degrees using a protractor.	SMMA_LO_00663
		R: Select the appropriate protractor to measure an angle.	SMMA_LO_00644
		R: Identify the better estimate for an angle measure.	SMMA_LO_00657
4.NS.1	Read and write whole numbers up to 1,000,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000.	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
		Identify the value of a given digit in a four-digit number.	SMMA_LO_01062
		Identify a number with a given digit in the thousands to hundred millions place.	SMMA_LO_01064
		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
		Express a number in expanded notation or determine the number from an expanded notation.	SMMA_LO_01097
4.NS.2	Compare two whole numbers up to 1,000,000 using >, =, and < symbols.	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
4.NS.3	Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Name and write mixed numbers using objects or pictures. Name and write mixed numbers as improper fractions using objects or pictures.	Find a fraction equal to 1 (halves to eighths).	SMMA_LO_00427
		Using a model, rewrite a whole number as a fraction (halves to eighths).	SMMA_LO_00443
		Using a model, rewrite a mixed number as a fraction (halves to eighths).	SMMA_LO_00446
		Compare fractions to 1 (halves to sixteenths).	SMMA_LO_00448
		Rewrite a fraction as a mixed number (halves to eighths).	SMMA_LO_00449
		Rewrite a mixed number as a fraction (fifths to ninths).	SMMA_LO_00450

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4.NS.4	Explain why a fraction, a/b, is equivalent to a fraction, (n × a)/(n × 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. [In grade 4, limit denominators of fractions to 2, 3, 4, 5, 6, 8, 10, 25, 100.]	Identify the figures with the equivalent fractional parts shaded.	SMMA_LO_00483
4.NS.5	Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, 1/2, and 1). Recognize 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
		Order three fractions from least to greatest (unlike denominators, halves to twelfths).	SMMA_LO_00440
		Compare fractions (unlike denominators).	SMMA_LO_00462
		Identify the greatest or least fraction in a problem (unlike denominators).	SMMA_LO_00482
		Compare fractions (unlike denominators).	SMMA_LO_00495
		Identify a list of fractions that is ordered from	SMMA_LO_00497
		Identify the fraction that is between two fractions.	SMMA_LO_00503
		R: Estimate the difference of two fractions.	SMMA_LO_01707
4.NS.6	Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., 1/2 = 0.5 = 0.50, 7/4 = 1 3/4 = 1.75).	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
		Mark the point on a number line that represents a decimal number (0.1 to 0.9).	SMMA_LO_00186
		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
		Match the word name with the decimal number (0.10 to 9.99).	SMMA_LO_00204
		Enter the decimal equivalent for a mixed number (hundredths, 0.10 to 9.99).	SMMA_LO_00205
		Determine the equivalent fraction for a decimal (the denominator is a factor of 100).	SMMA_LO_00259
		R: Identify the decimal number with a 0 to 9 in the tenths or hundredths place.	SMMA_LO_00202

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4.NS.7	Compare two decimals to hundredths by reasoning about their size based on 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
		R: Compare two decimal numbers (10.01 to 99.99).	SMMA_LO_00216
4.NS.8	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.	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
		Identify which numbers are divisible by another number (divisors 2 to 10).	SMMA_LO_01101
		Determine three factors of a given number.	SMMA_LO_01107
4.NS.9	Use place value understanding to round multi-digit whole numbers to any given place value.	Round a three- to five-digit number to the nearest hundred.	SMMA_LO_01081
		Round four- to five-digit numbers in context (to the nearest thousand).	SMMA_LO_01106
		R: Identify the multiple of 5 that is closest to a given number.	SMMA_LO_01005
		R: Identify the multiple of 5 that is closer to a number (25 to 94).	SMMA_LO_01006
5.AT.1	Solve real-world problems involving multiplication and division of whole numbers (e.g. by using equations to represent the problem). In division problems that involve a remainder, explain how the remainder affects the solution to the problem.	Identify a reasonable answer for a division problem.	SMMA_LO_00246
		Measure topsoil in a soil sample; calculate how long it took to form.	SMMA_LO_01323
		Solve a multiplication problem in context (one-, two-, and three-digit factors).	SMMA_LO_01604
		Solve a division problem in context (remainder).	SMMA_LO_01616
		Interpret the quotient and remainder of a division problem in context (three-digit dividends).	SMMA_LO_01617
		Find three consecutive integers when given their sum.	SMMA_LO_01639
		Share a set of objects equally to show a division problem (6, 7, 10, or 12 objects).	SMMA_LO_01663
		R: Identify the best estimate for a sum using data in a table (three- and four-digit addends).	SMMA_LO_01620
5.AT.2	Solve real-world problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators (e.g., by using visual fraction models and equations to represent the problem). Use benchmark fractions and number sense of fractions to estimate mentally and assess whether the answer is reasonable.	Add mixed numbers within a context; simplify if necessary (unlike denominators).	SMMA_LO_00509
		Subtract mixed numbers within a context; simplify if necessary (unlike denominators).	SMMA_LO_00510

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5.AT.3	Solve real-world problems involving multiplication of fractions, including mixed numbers (e.g., by using visual fraction models and equations to represent the problem).	Find the fractional part of a recipe (multiply a fraction and a mixed number).	SMMA_LO_00835
		Determine the sale price of an item when the price is reduced by one-half, one-third, or one-fourth.	SMMA_LO_01285
5.AT.4	Solve real-world problems involving division of unit fractions by non-zero whole numbers, and division of whole numbers by unit fractions (e.g., by using visual fraction models and equations to represent the problem).	Use models to solve real-world problems involving division of unit fractions by nonzero whole numbers and division of whole numbers by unit fractions.	SMMA_LO_02053
		Use models to solve real-world problems involving division of unit fractions by nonzero whole numbers.	SMMA_LO_02156
5.AT.5	Solve real-world problems involving addition, subtraction, mutliplication, and division with decimals to hundredths, including problems that involve money in decimal notation (e.g. by using equations to represent the problem).	Solve an addition problem by finding the total cost of two items (prices expressed as decimals, total < $0.50, no regrouping).	SMMA_LO_00181
		Identify the most reasonable answer to a multiplication problem involving money.	SMMA_LO_01278
		Identify the most reasonable answer to a division problem involving money.	SMMA_LO_01279
		Solve a problem in context that involves adding three amounts expressed as dollars and cents.	SMMA_LO_01608
		Find the number of dollar bills needed to buy two to four items (each $1.79 to $3.99 each).	SMMA_LO_01629
		Solve a one-step equation with decimals in context (addition and subtraction).	SMMA_LO_01799
		Extend an arithmetic sequence for three more terms.	SMMA_LO_01803
5.AT.6	Graph points with whole number coordinates on a coordinate plane. Explain how the coordinates relate the point as the distance from the origin on each axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).	Identify a point on a coordinate grid given the ordered pair.	SMMA_LO_01092
		Graph a point on a coordinate grid (Quadrant I).	SMMA_LO_01735
		Graph a set of ordered pairs from a table on a coordinate plane (Quadrant I).	SMMA_LO_01808
		R: Identify a point on a grid given an ordered pair, or identify the ordered pair for a point shown on the grid.	SMMA_LO_01057
		R: Find the coordinates for a point on a grid.	SMMA_LO_01077
5.AT.7	Represent real-world problems and equations by graphing ordered pairs in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	Graph a set of ordered pairs from a table on a coordinate plane (Quadrant I).	SMMA_LO_01808
		Make a table and a graph when given a rule in the form y = ax or y = x + a.	SMMA_LO_02139
5.AT.8	Define and use up to two variables to write linear expressions that arise from real-world problems, and evaluate them for given values.	Write an expression to represent a real-world problem, using variables to represent numbers.	SMMA_LO_02062
		Make a table and a graph when given a rule in the form y = ax or y = x + a.	SMMA_LO_02139
		R: Identify the written phrase that is a translation of a expression or inequality.	SMMA_LO_01815
		R: Translate an expression into a written phrase (two-step).	SMMA_LO_01816

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5.C.1	Multiply multi-digit whole numbers fluently using a standard algorithmic approach.	Find the missing dividend or divisor (combinations 20 × 20 to 90 × 90).	SMMA_LO_00303
		Find the missing factor (products 20 x 11 to 90 x 99, multiples of 10).	SMMA_LO_00891
		Multiply whole numbers (products 10,000 x 2 to 99,999 x 9).	SMMA_LO_00900
		Multiply whole numbers (student choice, products 100 x 20 to 990 x 90, multiples of 10).	SMMA_LO_00902
		Multiply whole numbers (student choice, products 101 x 20 to 999 x 90, multiples of 10).	SMMA_LO_00904
		Multiply whole numbers (student choice, products 100 x 21 to 990 x 90, multiples of 10).	SMMA_LO_00905
		Multiply (student choice, products 1000 × 20 to 9999 × 90, multiples of 10).	SMMA_LO_00906
		Multiply whole numbers (student choice, products 101 x 21 to 999 x 99).	SMMA_LO_00907
		Multiply by a multiple of 10 (student choice, 10,000 × 20 to 99,999 × 90).	SMMA_LO_00908
		Multiply whole numbers (student choice, products 1000 × 21 to 9999 × 99).	SMMA_LO_00909
		Multiply whole numbers (student choice, 10,000 × 21 to 99,999 × 99).	SMMA_LO_00910
		Multiply whole numbers (multiples of 10 or 100).	SMMA_LO_00911
		Estimate the product of two numbers (factors 101 to 949).	SMMA_LO_00912
		R: Estimate the product of three factors (1,000 to 350,000).	SMMA_LO_01099
		R: Estimate the product by rounding each factor.	SMMA_LO_01622
5.C.2	Find whole-number quotients and remainders with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning used.	Divide (combinations 6 x 20 to 9 x 90).	SMMA_LO_00293
		Multiply multiples of 10 using mental math (20 x 20 to 90 x 90).	SMMA_LO_00299
		Find the missing dividend or divisor (combinations 20 × 20 to 90 × 90).	SMMA_LO_00303
		Divide using the long division algorithm (three-digit number, two-digit divisor, remainder).	SMMA_LO_00304
		Estimate the sum, difference, product or quotient to solve a problem in context (round to the nearest thousand).	SMMA_LO_01109
		R: Estimate the quotient in a long division problem (three-digit dividend, two-digit divisor, remainder).	SMMA_LO_00301
		R: Choose the best estimate for a long division problem (three-digit dividends, two-digit divisors).	SMMA_LO_00315
5.C.3	Compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	Determine whether multiplying a number by a factor results in scaling the number up or down.	SMMA_LO_02050

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5.C.4	Add and subtract fractions with unlike denominators, including mixed numbers.	Subtract a fraction from 1; simplify (halves to sixteenths).	SMMA_LO_00464
		Add fractions; no simplifying (unlike denominators).	SMMA_LO_00465
		Subtract fractions; no simplifying (unlike denominators).	SMMA_LO_00466
		Add fractions; no simplifying (unlike denominators).	SMMA_LO_00467
		Subtract fractions; no simplifying (unlike denominators).	SMMA_LO_00468
		Add fractions; simplify if necessary (unlike denominators).	SMMA_LO_00471
		Subtract fractions; simplify if necessary (unlike denominators).	SMMA_LO_00472
		Add fractions; simplify if necessary (unlike denominators).	SMMA_LO_00473
		Subtract fractions; simplify if necessary (unlike denominators).	SMMA_LO_00474
		Add mixed numbers; simplify if necessary (like denominators).	SMMA_LO_00484
		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
		R: Find the missing numerator or denominator in an equivalent fraction (simplified fractions 1/2 to 3/4).	SMMA_LO_00451
		R: Determine if a fraction can be simplified; simplify if possible (simplified fractions 1/2 to 3/4).	SMMA_LO_00452
		R: Find the missing numerator or denominator in an equivalent fraction (simplified fractions 1/2 to 7/8).	SMMA_LO_00453
		R: Determine if a fraction can be simplified; simplify if possible (simplified fractions 1/2 to 7/8).	SMMA_LO_00454
		R: Write a fraction in simplest form (simplified fractions 1/2 to 7/8).	SMMA_LO_00455
		R: Determine if a fraction can be simplified; simplify if possible (simplified fractions 1/2 to 7/8).	SMMA_LO_00456
		R: Find an equivalent fraction of a simplified fraction (simplified fractions 1/2 to 8/9).	SMMA_LO_00457
		R: Find three equivalent fractions (simplified fractions 1/2 to 8/9).	SMMA_LO_00458
		R: Determine the least common denominator of two fractions.	SMMA_LO_00493
		R: Generate a table of equivalent fractions for a fraction in simplest form.	SMMA_LO_01791
		R: Generate a table of equivalent fractions for a fraction not in simplest form.	SMMA_LO_01792
		R: Identify the fraction equivalent to the given fraction.	SMMA_LO_01793

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5.C.5	Use visual fraction models and numbers to multiply a fraction by a fraction or a whole number.	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
		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
		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
5.C.6	Explain why multiplying a number by a fraction greater than 1 results in a product greater than the given number. Explain why multiplying a number by a fraction less than 1 results in a product smaller than the given number. Relate the principle of fraction equivalence, a/b = (n × a)/(n × b), to the effect of multiplying a/b by 1.	Determine whether multiplying a number by a factor results in scaling the number up or down.	SMMA_LO_02051
5.C.7	Use visual fraction models and numbers to divide a unit fraction by a non-zero whole number and to divide a whole number by a unit fraction.	Model the division of a unit fraction by a nonzero whole number, and compute the quotient.	SMMA_LO_02052
5.C.8	Add, subtract, multiply, and divide decimals to hundredths, using models or drawings and strategies based on place value or the properties of operations. Describe the strategy and explain the reasoning.	Add decimal numbers (sums less than 10.0, regrouping).	SMMA_LO_00199
		Add two decimal numbers (sums 1.0 to 98.9, regrouping).	SMMA_LO_00201
		Subtract decimal numbers (minuends and subtrahends 0.1 to 99.9, with or without regrouping).	SMMA_LO_00203
		Subtract money amounts (sums less than $17.00, regrouping).	SMMA_LO_00208
		Align the decimal numbers in a vertical addition problem; then solve (hundredths, regrouping).	SMMA_LO_00211
		Align the decimal numbers in a vertical subtraction problem; then solve (hundredths, regrouping).	SMMA_LO_00212
		Subtract money amounts (sums less than $50.00, regrouping).	SMMA_LO_00214
		Find the missing decimal number on a number line; then count by multiples of tenths to find the product.	SMMA_LO_00220
		Multiply two decimals or multiply a decimal by a whole number (tenths to hundredths).	SMMA_LO_00223
		Multiply decimals (to thousandths x hundredths).	SMMA_LO_00234
		Divide a decimal by a whole number.	SMMA_LO_00239

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5.C.8	Add, subtract, multiply, and divide decimals to hundredths, using models or drawings and strategies based on place value or the properties of operations. Describe the strategy and explain the reasoning.	Move the decimal point in the divisor and dividend in a long division problem.	SMMA_LO_00247
		Move the decimal point in the divisor and dividend in a long division problem; then find the quotient.	SMMA_LO_00249
		Find the missing decimal number in a pattern.	SMMA_LO_00253
		Identify the symbol (< or >) needed to complete the inequality.	SMMA_LO_00254
		Find the perimeter of a polygon (decimal numbers, metric units).	SMMA_LO_00790
		Measure the amount of rainfall for the week; then complete the chart and determine the total amount of rainfall for the month.	SMMA_LO_01327
		R: Identify the best estimate of a sum, difference, or product.	SMMA_LO_00231
		R: Identify the best estimate for a quotient (decimal divided by a whole number).	SMMA_LO_00238
		R: Identify the best estimate for a quotient or a product using compatible numbers (factors less than 10 with two to four decimal places, divisors less than 10 with two to three decimal places).	SMMA_LO_01123
5.C.9	Evaluate expressions with parentheses or brackets involving whole numbers using the commutative properties of addition and multiplication, associative properties of addition and multiplication, and distributive property.	Evaluate an expression using the order of operations.	SMMA_LO_01091
5.DS.1	Formulate questions that can be addressed with data and make predictions about the data. Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (including frequency tables), line plots, bar graphs, and line graphs. Recognize the differences in representing categorical and numerical data.	Graph and interpret rainfall data in a chart.	SMMA_LO_01328
		R: Interpret a line graph with time and temperature data, and add a point to line graph.	SMMA_LO_01324
		R: Given the survival needs for a bug, interpret a line graph with time and temperature data.	SMMA_LO_01325
5.DS.2	Understand and use measures of center (mean and median) and frequency (mode) to describe a data set.	Find the average of 3 numbers.	SMMA_LO_00151
		Determine a student's grade point average based on five grades.	SMMA_LO_00179
		Determine the mean of a data set of three to five customary weights or metric masses.	SMMA_LO_00836
		Identify the median of a data set with an odd number of items.	SMMA_LO_01168
		Identify the median of a data set with an even number of items and the two middle values are not equal.	SMMA_LO_01170
		Determine the mode of a data set.	SMMA_LO_01719
		Determine the median of a data set.	SMMA_LO_01726

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5.DS.2	Understand and use measures of center (mean and median) and frequency (mode) to describe a data set.	Determine the mean of a data set.	SMMA_LO_01727
		Determine the mode of a set of data.	SMMA_LO_01765
		Determine the median of a set of data.	SMMA_LO_01768
		R: Identify the median of a data set with an even number of items and the two middle values are equal.	SMMA_LO_01169
		R: Solve a problem in context by finding the average (mean) of three to seven numbers.	SMMA_LO_01619
5.G.1	Identify, describe, and draw triangles (right, acute, obtuse) and circles using appropriate tools (e.g., ruler or straightedge, compass and technology). Understand the relationship between radius and diameter.	Identify parts of a circle (center, radius, and diameter).	SMMA_LO_00633
		Identify a part of a circle (center, radius, chord, or diameter).	SMMA_LO_00653
5.G.2	Identify and classify polygons including quadrilaterals, pentagons, hexagons, and triangles (equilateral, isosceles, scalene, right, acute and obtuse) based on angle measures and sides. Classify polygons in a hierarchy based on properties.	Identify polygons and circles (pentagons, hexagons, octagons, parallelograms).	SMMA_LO_00627
		Identify the regular polygons.	SMMA_LO_00651
		Identify the true statement about a relationship among quadrilaterals.	SMMA_LO_00656
		Identify equilateral, isosceles, and scalene triangles.	SMMA_LO_00658
		R: Identify a shape with positive and negative tests.	SMMA_LO_00578
5.M.1	Convert among different-sized standard measurement units within a given measurement system, and use these conversions in solving multi-step real-world problems.	Add metric measurements with unlike units and express the sum in terms of the larger unit.	SMMA_LO_00172
		Convert customary units of length (inches, feet, and yards).	SMMA_LO_00791
		Convert customary units of capacity (cups, pints, quarts, and gallons).	SMMA_LO_00796
		Convert between customary units of weight (ounces and pounds).	SMMA_LO_00797
		Convert metric units of length (mm, cm, m, and km; whole numbers).	SMMA_LO_00814
5.M.2	Find the area of a rectangle with fractional side lengths by modeling with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.	Multiply mixed numbers to determine the area of a rectangle or triangle; simplify if necessary.	SMMA_LO_00508
		Find the area of a rectangle with fractional side lengths in two ways: by multiplying its side lengths and by tiling it with smaller rectangles.	SMMA_LO_02049
5.M.3	Develop and use formulas for the area of triangles, parallelograms and trapezoids. Solve real-world and other mathematical problems that involve perimeter and area of triangles, parallelograms and trapezoids, using appropriate units for measures.	Find the area of a triangle (2 to 72 square inches).	SMMA_LO_00176
		Multiply mixed numbers to determine the area of a rectangle or triangle; simplify if necessary.	SMMA_LO_00508
		Find the perimeter of a polygon (decimal numbers, metric units).	SMMA_LO_00805
		Use a formula to find the area of a parallelogram.	SMMA_LO_00824
		Find the area of a triangle using a formula.	SMMA_LO_00827

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5.M.4	Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths or multiplying the height by the area of the base.	Find the volume of a prism by packing the prism with unit cubes.	SMMA_LO_02042
		R: Find the volume of a rectangular solid by counting cubes.	SMMA_LO_00829
		R: Identify a unit cube and what attribute it is used to measure.	SMMA_LO_02041
5.M.5	Apply the formulas V = l × w × h and V = B × h for right rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths to solve real-world problems and other mathematical problems involving shapes.	Determine the volume of a box given the height, width, and length (60 to 480 customary or metric cubic units).	SMMA_LO_00174
		Find the volume of a rectangular solid by counting cubes.	SMMA_LO_00833
		Choose the best estimate for the volume of a rectangular prism.	SMMA_LO_00848
		Compute the volume of right rectangular prisms using formulas.	SMMA_LO_02043
5.M.6	Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems and other mathematical problems.	Find the volume of a three-dimensional figure by decomposing that figure into two right rectangular prisms and then adding those prisms' volumes.	SMMA_LO_02044
5.NS.1	Use a number line to compare and order fractions, mixed numbers, and decimals to thousandths. Write the results using >, =, and < symbols.	Compare hundredths to multiples of ¼.	SMMA_LO_00209
		Enter a decimal number on a number line (1.11 to 9.89).	SMMA_LO_00213
		Find the missing decimal number on a number line (1.0 to 9.89).	SMMA_LO_00215
		Order three decimal numbers (tenths to hundredths).	SMMA_LO_00218
		Compare decimal numbers (to thousandths).	SMMA_LO_00225
		Order three decimals from least to greatest (to thousandths).	SMMA_LO_00236
		R: Match a decimal number to an equivalent fraction (tenths to thousandths).	SMMA_LO_00224
		R: Match a decimal number to its word name (to thousandths).	SMMA_LO_00227
		R: Match a decimal number to a model (thousandths).	SMMA_LO_00242
		R: Enter a decimal number in a place-value chart (tenths to thousandths).	SMMA_LO_01089
		R: Identify a list of decimal numbers ordered from least to greatest.	SMMA_LO_01103
5.NS.2	Explain different interpretations of fractions, including: as parts of a whole, parts of a set, and division of whole numbers by whole numbers.	Using pictures, find a fractional amount of a whole number (product of halves to fourths and 2 to 16).	SMMA_LO_00428
		Model a division word problem that results in a rational quotient; then express the word problem with an equation.	SMMA_LO_02047

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5.NS.3	Recognize the relationship that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right, and inversely, a digit in one place represents 1/10 of what it represents in the place to its left.	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
5.NS.4	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	Divide a decimal by 0.1, 0.01, or 0.001.	SMMA_LO_00263
		Divide a decimal by 0.1, 0.01, or 0.001 (dividends 0.001 to 0.999).	SMMA_LO_00267
		Multiply one- to five-digit whole numbers by powers of ten (10 to 100,000).	SMMA_LO_01078
		Explain patterns in the number of zeros of the product and in the placement of the decimal point when multiplying a number by powers of ten.	SMMA_LO_02046
		R: Multiply decimals by 10, 100, or 1000.	SMMA_LO_00235
		R: Multiply a whole number or a decimal by 0.1, 0.01, or 0.001.	SMMA_LO_00252
5.NS.5	Use place value understanding to round decimal numbers up to thousandths to any given place value.	Round a decimal to the nearest tenth, hundredth, or whole number.	SMMA_LO_00230
		Estimate the difference by rounding to the nearest dollar (minuends $5.00 to $20.00, subtrahends $3.00 to $15.00).	SMMA_LO_01669
5.NS.6	Understand, interpret, and model percents as part of a hundred (e.g. by using pictures, diagrams, and other visual models).	Read and interpret data from a circle graph labeled with percents.	SMMA_LO_01208
		Determine the percent (100 total items).	SMMA_LO_01713
		Express a fraction as a percent (denominator is 100).	SMMA_LO_01714
6.AF.1	Evaluate expressions for specific values of their variables, including expressions with whole-number exponents and those that arise from formulas used in real-world problems.	R: Given the value for the variable, evaluate an addition expression (sums 4 to 12).	SMMA_LO_01683
		R: Evaluate an expression with variables using substitution and a value chart (addition, sums to 18).	SMMA_LO_01685
		R: Evaluate the expression mx + c or mx - c.	SMMA_LO_01739
6.AF.2	Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions and to justify whether two linear expressions are equivalent when the two expressions name the same number regardless of which value is substituted into them.	Choose all expressions that are equivalent to a given expression.	SMMA_LO_02060
		R: Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient).	SMMA_LO_02057
6.AF.3	Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.	Identify an expression to describe the pattern generated by a table.	SMMA_LO_01742
		Identify the expression that is a translation of the written phrase.	SMMA_LO_01759
		Write expressions that record operations with numbers and variables.	SMMA_LO_02056

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6.AF.4	Understand that solving an equation or inequality is the process of answering the following question: Which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	SMMA_LO_02061
6.AF.5	Solve equations of the form x + p = q and px = q fluently for cases in which p, q and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.	Identify a x (b - c) as equivalent to (a x b) - (a x c).	SMMA_LO_00130
		Solve for a or c in a/b + c/b = d/b (sums 2/3 to 11/12).	SMMA_LO_00356
		Solve for a or b in a x b = c (products 6 x 2 to 9 x 12).	SMMA_LO_00357
		Solve for a or b in a ÷ b = c (combinations 2 ÷ 10 to 5 ÷ 12).	SMMA_LO_00359
		Solve for a or c in (a/b - c/b = d/b (minuends 2/3 to 11/12).	SMMA_LO_00360
		Solve for a or b in a ÷ b = c (combinations 6 ÷ 10 to 9 ÷ 12).	SMMA_LO_00361
		Solve for a or c in a/b - c/b = d/b (improper fractions, minuends 4/3 to 35/12).	SMMA_LO_00362
		Solve for a or b in a x b = x (products 2 x 10 to 12 x 12).	SMMA_LO_00363
		Solve for a or c in a/b + c/b = d/b (improper fractions, sums 4/3 to 35/12).	SMMA_LO_00364
		Solve for a or b in a ÷ b = c (combinations 6 ÷ 20 to 9 ÷ 90, multiples of 10).	SMMA_LO_00365
		Solve for a or b in a x b = x (products 2 x 20 to 12 x 90, multiples of 10).	SMMA_LO_00366
		Solve for a or b in a + b = c (decimals to tenths, no regrouping).	SMMA_LO_00367
		Solve for a or b in a - b = c (decimals to tenths, regrouping).	SMMA_LO_00368
		Solve for a or b in a x b = c (products from 0.2 x 0.6 to 0.9 x 0.9).	SMMA_LO_00369
		Solve for a or b in a ÷ b = c (combinations 0.6 × 0.6 to 0.9 × 0.9).	SMMA_LO_00370
		Solve for a, b, or c in a × b/c = d/e (combinations to 12 × 12).	SMMA_LO_00371
		Solve for a, b, c, or d in a/b × c/d = e/f (combinations to 12 × 12).	SMMA_LO_00372
		Solve for a or b in a + b = c (decimals to hundredths).	SMMA_LO_00373
		Solve for a or b in a - b = c (decimals to hundredths, regrouping).	SMMA_LO_00374
		Solve for a or b in a x b = c (products from 0.02 x 0.13 to 0.09 x 0.19).	SMMA_LO_00376
		Solve for a or b in a ÷ b = c (up to 4-digit decimals).	SMMA_LO_00378
		Complete the steps to solve for a in a + b = c or a - b = c in steps (sums and differences 2 to 20).	SMMA_LO_00379

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6.AF.5	Solve equations of the form x + p = q and px = q fluently for cases in which p, q and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.	Solve for x in ax = c in steps (products 4 x 4 to 9 x 10).	SMMA_LO_00380
		Complete the steps to solve for a in a ÷ b = c (combinations 4 × 4 to 9 × 10).	SMMA_LO_00381
		Solve for a in a + b = c (a is from -20 to -1).	SMMA_LO_00388
		Solve for a in a - b = c (differences from -19 to 11).	SMMA_LO_00389
		Solve for x in ax = b (products from -(4 x 4) to -(9 x 9)).	SMMA_LO_00390
		Solve for a in a/b = c (products from -(4 x 4) to -(9 x 9)).	SMMA_LO_00391
		Given a perimeter, mark equilateral polygons with the same side measures.	SMMA_LO_00849
		Identify related multiplication and division number sentences that can be used to solve a problem.	SMMA_LO_01080
		Solve a one-step equation (subtraction).	SMMA_LO_01688
		Solve a one-step equation (multiplication).	SMMA_LO_01690
		Solve a one-step equation (division).	SMMA_LO_01692
		Solve a one-step equation in context (addition, two-digit whole numbers).	SMMA_LO_01743
		Solve a one-step equation in context (subtraction, two-digit whole numbers).	SMMA_LO_01744
		Solve a one-step equation in context (division, two-digit whole numbers).	SMMA_LO_01745
		Solve a one-step equation in context (division, two-digit whole numbers).	SMMA_LO_01747
		Solve one-step equations (multiplication, fractions).	SMMA_LO_01795
		Solve one-step equations (subtraction fractions).	SMMA_LO_01796
		Solve a one-step equation (multiplication, decimals).	SMMA_LO_01797
		Solve a one-step equation (two-digit integers, addition and subtraction).	SMMA_LO_01844
		Solve a one-step equation (integers, multiplication and division).	SMMA_LO_01845
		Solve a one-step equation (fractions, multiplication and division).	SMMA_LO_01847
		Solve a one-step equation (fractions, addition and subtraction).	SMMA_LO_01848
		Solve a one-step equation (decimals, multiplication and division).	SMMA_LO_01849
		Solve a one-step equations (fractions, addition and subtraction).	SMMA_LO_01868
		Apply mathematical process standards to use equations and represent situations.	SMMA_LO_02140
6.AF.6	Write an inequality of the form x > c, x ≥ c, x < c, or x ≤ c, where c is a rational number, to represent a constraint or condition in a real-world or other mathematical problem. Recognize inequalities have infinitely many solutions and represent solutions on a number line diagram.	Write an inequality of the form x > c or x < c to represent a constraint in a real-world problem.	SMMA_LO_02064
		Write an inequality of the form x > c or x < c to represent a constraint in a real-world problem. Then represent the solution on a number line.	SMMA_LO_02065
		Apply mathematical process standards to use equations and represent situations.	SMMA_LO_02140

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6.AF.7	Understand that signs of numbers in ordered pairs indicate the quadrant containing the point; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. Graph points with rational number coordinates on a coordinate plane.	Graph a set of ordered pairs from a table on a coordinate plane.	SMMA_LO_01809
		Graph a set of ordered pairs from a table on a coordinate plane.	SMMA_LO_01810
		Given two points, describe how the points are related: reflected across the x-axis, reflected across the y-axis, or reflected across both axes.	SMMA_LO_02108
6.AF.8	Solve real-world and other mathematical problems by graphing points with rational number coordinates on a coordinate plane. Include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	Graph points on a coordinate plane based on a real-world context.	SMMA_LO_02112
		Find distances between points with the same first coordinate or the same second coordinate by using coordinates and absolute value.	SMMA_LO_02113
6.AF.9	Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane.	Describe the relationship between two sets of numbers in a relation or function using multiplication (factors 2 - 5).	SMMA_LO_01655
		Evaluate an expression within a context (multiplication).	SMMA_LO_01740
		Find missing values in a table that represents a proportional relationship, and plot the pairs of values on the coordinate plane.	SMMA_LO_02115
6.AF.10	Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.	Form a proportion that can be used to solve for the height of an object.	SMMA_LO_00660
		Identify the correct proportion for the context, and then solve.	SMMA_LO_01826
6.C.1	Divide multi-digit whole numbers fluently using a standard algorithmic approach.	Estimate the missing factor in a number sentence (round to the nearest ten, products 2,010 to 81,090).	SMMA_LO_00913
		Extend an iterative pattern.	SMMA_LO_01754
6.C.2	Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	Subtract metric length or weight measurements expressed as decimals (to tenths, difference 1.2 to 8.9, regrouping).	SMMA_LO_00159
		Add two decimal numbers (tenths, sums 1.0 to 2.0, regrouping).	SMMA_LO_00192
		Add two decimal numbers using mental math (sums 1.1 to 9.9, no regrouping).	SMMA_LO_00193
		Subtract decimal numbers using mental math (minuends and subtrahends 0.1 to 9.9, no regrouping).	SMMA_LO_00195
		Add two decimal numbers using mental math (sums 10.1 to 99.9, no regrouping).	SMMA_LO_00196

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6.C.2	Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	Subtract decimal numbers using mental math (minuends and subtrahends 10.1 to 99.9, no regrouping).	SMMA_LO_00197
		Subtract decimal numbers (minuends 2.0 to 9.9, subtrahends 0.1 to 0.9, regrouping).	SMMA_LO_00198
		Add decimals using addition facts (sums 0.02-0.99).	SMMA_LO_00206
		Subtract decimals numbers (minuends and subtrahends 0.01 to 9.99).	SMMA_LO_00207
		Add or subtract decimals using mental math (sums less than 1.00, with or without regrouping).	SMMA_LO_00210
		Add decimals numbers using mental math (sums 1.0 to 99.8, regrouping).	SMMA_LO_00217
		Find the missing factor and quotient in two related number sentences (products 0.2 x 2 to 0.9 x 5).	SMMA_LO_00219
		Multiply decimals displayed horizontally (0.2 x 0.6 to 0.9 x 0.12).	SMMA_LO_00232
		Divide a decimal by a decimal (horizontal division; dividends to tenths).	SMMA_LO_00237
		Determine the missing factor in the multiplication number sentence (decimals, to ten-thousandths).	SMMA_LO_00240
		Divide decimals (0.3 x 0.3 to 0.9 x 0.09).	SMMA_LO_00245
		Divide decimals (0 x 2 to 2 x 5).	SMMA_LO_00251
		Multiply fractions; no simplifying.	SMMA_LO_00469
		Multiply a whole number by a proper fraction; no simplifying.	SMMA_LO_00470
		Multiply fractions; simplify.	SMMA_LO_00475
		Multiply a fraction and a whole number; simplify.	SMMA_LO_00477
		Divide fractions; simplify if necessary.	SMMA_LO_00487
		Divide a fraction by a mixed number; simplify if necessary.	SMMA_LO_00491
		Divide a whole number by a fraction.	SMMA_LO_00492
		Find a fractional part of a fraction.	SMMA_LO_00498
		Add mixed numbers; simplify if necessary (unlike denominators).	SMMA_LO_00499
		Subtract mixed numbers; simplify if necessary (unlike denominators).	SMMA_LO_00500
		Divide a mixed number by a whole number; simplify if necessary.	SMMA_LO_00502
		Add mixed numbers; simplify if necessary (unlike denominators).	SMMA_LO_00504
		Subtract mixed numbers; simplify if necessary (unlike denominators).	SMMA_LO_00505
		Multiply three fractions; simplify if necessary.	SMMA_LO_00506
		Divide fractions; simplify.	SMMA_LO_00512
		Find a decimal number that is either greater than or less than two decimal numbers.	SMMA_LO_01118
		Add the decimal numbers provided on a data table.	SMMA_LO_01785

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6.C.2	Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	Subtract the decimal numbers provided on a data table.	SMMA_LO_01786
		Divide a fraction by a fraction; simplify if necessary.	SMMA_LO_01788
		Divide a mixed number by a fraction; simplify if necessary.	SMMA_LO_01789
		Divide a mixed number by a mixed number; simplify if necessary.	SMMA_LO_01790
		Identify the rule for an iterative pattern.	SMMA_LO_01840
		R: Multiply a decimal and a whole number displayed horizontally (0.02 x 2 to 0.09 x 5).	SMMA_LO_00221
		R: Identify the location of the decimal point of the product of two decimals (factors, tenths to hundredths).	SMMA_LO_00222
		R: Align the decimal numbers for a vertical addition problem; then solve (to thousandths).	SMMA_LO_00226
		R: Align the decimal numbers for a vertical subtraction problem; then solve (to thousandths).	SMMA_LO_00228
		R: Align the decimal numbers in a vertical subtraction problem; then solve (decimals to thousandths).	SMMA_LO_00233
		R: Subtract decimals with regrouping (to ten-thousandths).	SMMA_LO_00243
		R: Multiply decimals (to ten-thousandths x ten-thousandths).	SMMA_LO_00244
		R: Divide a decimal by a whole number.	SMMA_LO_00248
		R: Identify the probable error in a multiplication calculation with decimals.	SMMA_LO_00250
		R: Multiply mixed numbers; simplify if necessary.	SMMA_LO_00501
6.C.3	Solve real-world problems with positive fractions and decimals by using one or two operations.	Find the amount of an ingredient needed to make two, three, or four times a recipe.	SMMA_LO_01627
		Subtract two fractions from a whole within a context.	SMMA_LO_01634
		Add two fractional parts of whole numbers in context.	SMMA_LO_01640
		R: Estimate the sum, product, or quotient in problems with fractions.	SMMA_LO_01095
6.C.4	Compute quotients of positive fractions and solve real-world problems involving division of fractions by fractions. Use a visual fraction model and/or equation to represent these calculations.	Determine the decimal and percent that is represented by a model (base-ten blocks, hundredths).	SMMA_LO_00256
		Divide a whole number by a fraction; simplify if necessary.	SMMA_LO_01787
		R: Identify the equivalent expression for a fraction, whole number, or a mixed numbers being divided by a fraction, a whole number, or a mixed number.	SMMA_LO_00511
6.C.5	Evaluate positive rational numbers with whole number exponents.	Give the value of a number (1 to 10) raised to a power (1 to 5).	SMMA_LO_01098
		R: Match expressions with repeated factors to numbers in exponential form to create equations.	SMMA_LO_01100

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IN Standard	IN Standard Text	Item Description	Item ID
6.C.6	Apply the order of operations and properties of operations (identity, inverse, commutative properties of addition and multiplication, associative properties of addition and multiplication, and distributive property) to evaluate numerical expressions with nonnegative rational numbers, including those using grouping symbols, such as parentheses, and involving whole number exponents. Justify each step in the process.	Compare two expressions using the additive inverse property.	SMMA_LO_00120
		Evaluate -(a + b), where 9 < a < 19, 1 < b < 9.	SMMA_LO_00127
6.DS.2	Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.	Identify the mode of a set of data.	SMMA_LO_01164
		Identify the box-and-whiskers plot that matches a given set of data.	SMMA_LO_01201
		Identify data sets that match the data represented in a given box-and-whiskers plot.	SMMA_LO_01202
		Read and interpret a line graph.	SMMA_LO_01764
		R: Find the five values (upper and lower extremes, median, and upper and lower quartiles) from a set of data that are needed to create a box-and-whiskers plot.	SMMA_LO_01199
6.DS.3	Formulate statistical questions; collect and organize the data (e.g., using technology); display and interpret the data with graphical representations (e.g., using technology).	Find the range of a set of data.	SMMA_LO_01166
		R: Read and interpret data in a table to determine the time it would take for skin to freeze.	SMMA_LO_01314
		R: Read and interpret data in a table to determine the time it would take for skin to freeze.	SMMA_LO_01315
6.DS.4	Summarize numerical data sets in relation to their context in multiple ways, such as: report the number of observations; describe the nature of the attribute under investigation, including how it was measured and its units of measurement; determine quantitative measures of center (mean and/or median) and spread (range and interquartile range), as well as describe any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered; and relate the choice of measures of center and spread to the shape of the data distribution and the context in which the data were gathered.	Find the range of a set of data.	SMMA_LO_01166
		Determine the range of a set of data represented in a line graph.	SMMA_LO_01176
		Determine the range, mean, median, and mode (one-digit numbers).	SMMA_LO_01210
		Determine the range of a set of data.	SMMA_LO_01766

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IN Standard	IN Standard Text	Item Description	Item ID
6.GM.1	Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.	Convert measurement units either by making a table or by multiplying by a unit rate.	SMMA_LO_02117
		R: Calculate the volume of a rectangular prism; then convert the cubic feet or cubic meters into gallons or liters.	SMMA_LO_01819
6.GM.2	Know that the sum of the interior angles of any triangle is 180º and that the sum of the interior angles of any quadrilateral is 360º. Use this information to solve real-world and mathematical problems.	Solve a problem involving equal angle measures.	SMMA_LO_00677
6.GM.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate; apply these techniques to solve real-world and other mathematical problems.	R: Identify the set of vertices on a grid can be connected to form a figure (triangle, quadrilateral, rectangle, or square).	SMMA_LO_00625
6.GM.5	Find the volume of a right rectangular prism with fractional edge lengths using unit cubes of the appropriate unit fraction edge lengths (e.g., using technology or concrete materials), and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths to solve real-world and other mathematical problems.	Solve for a variable in the formula for volume of a rectangular prism (whole numbers and mixed numbers).	SMMA_LO_01817
6.NS.1	Understand that positive and negative numbers are used to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge). Use positive and negative numbers to represent and compare quantities in real-world contexts, explaining the meaning of 0 in each situation.	Read the temperature on a thermometer to nearest degree (-10 to 10 degrees).	SMMA_LO_00804
		Use positive and negative numbers together to represent quantities having opposite directions or values.	SMMA_LO_02066
		Describe situations that can be represented by opposite quantities.	SMMA_LO_02086
6.NS.2	Understand the integer number system. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself (e.g., –(–3) = 3), and that 0 is its own opposite.	Locate the missing integer on a number line (-3 to -12).	SMMA_LO_00101
		Compare two expressions using the additive inverse property.	SMMA_LO_00120
		Evaluate the expression -(-a), where a has values 1 to 99.	SMMA_LO_01518
		Identify absolute value as a distance from zero on a number line.	SMMA_LO_01823

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IN Standard	IN Standard Text	Item Description	Item ID
6.NS.3	Compare and order rational numbers and plot them on a number line. Write, interpret, and explain statements of order for rational numbers in real-world contexts.	Compare two expressions using the additive inverse property.	SMMA_LO_00120
		Determine the least or greatest integer (-10 to 10).	SMMA_LO_01102
		Compare rational numbers in real-world contexts.	SMMA_LO_02109
		Complete statements of order for rational numbers in real-world contexts.	SMMA_LO_02110
		R: Identify the place value of a digit in a decimal number (tenths to ten thousandths).	SMMA_LO_00241
6.NS.4	Understand that the absolute value of a number is the distance from zero on a number line. Find the absolute value of real numbers and know that the distance between two numbers on the number line is the absolute value of their difference. Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.	Identify absolute value as a distance from zero on a number line.	SMMA_LO_01823
		Evaluate the absolute value of a number.	SMMA_LO_01824
		Compare the absolute values of positive and negative quantities in a real-world situation.	SMMA_LO_02111
6.NS.5	Know commonly used fractions (halves, thirds, fourths, fifths, eighths, tenths) and their decimal and percent equivalents. Convert between any two representations (fractions, decimals, percents) of positive rational numbers without the use of a calculator.	Find an equivalent mixed number for a decimal (tenths to ten thousandths).	SMMA_LO_00255
		Divide to convert from a fraction to a decimal equivalent.	SMMA_LO_00258
		Express a mixed number as a decimal.	SMMA_LO_00260
		Express a percent as a fraction and simplify.	SMMA_LO_00269
		Identify equivalent representations of numbers.	SMMA_LO_01114
		Identify a number not equivalent to four others.	SMMA_LO_01116
		Complete the equivalence table by expressing a decimal number as a fraction and a percent.	SMMA_LO_01820
		Complete the equivalence table by expressing a decimal number as a fraction and a percent (round answer to the nearest hundredth).	SMMA_LO_01821
		Complete the equivalence table by expressing a fraction as a decimal number and a percent (round answer to the nearest hundredth).	SMMA_LO_01822
		R: Identify the division problem that can be used to rewrite a fraction as a decimal.	SMMA_LO_00257
		R: Identify decimals or fractions that are not equivalent to a given decimal or fraction.	SMMA_LO_01094
6.NS.6	Identify and explain prime and composite numbers.	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
		Identify sets of prime and composite numbers.	SMMA_LO_01119

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6.NS.7	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers from 1 to 100, with a common factor as a multiple of a sum of two whole numbers with no common factor.	Determine the equivalent fractions using the least common denominator of two given fractions.	SMMA_LO_00494
		Given the prime factorization of two numbers, find the common multiple.	SMMA_LO_01108
		Find the greatest common factor for two to three numbers.	SMMA_LO_01110
		Find the least common multiple of two or three numbers.	SMMA_LO_01112
		R: Identify a common factor of two numbers (4 to 81).	SMMA_LO_01088
		R: Identify the common multiples for two to three numbers (2 to 20).	SMMA_LO_01096
6.NS.8	Interpret, model, and use ratios to show the relative sizes of two quantities. Describe how a ratio shows the relationship between two quantities. Use the following notations: a/b, a to b, a:b.	Identify the ratio.	SMMA_LO_01712
		Write a ratio in three different forms.	SMMA_LO_01825
		Determine the fraction needed to complete the proportion.	SMMA_LO_01827
6.NS.9	Understand the concept of a unit rate and use terms related to rate in the context of a ratio relationship.	Find the unit price of an item (products 2 × 6 to 25 × 32).	SMMA_LO_00830
		Identify two unit rates for a given word problem.	SMMA_LO_02114
6.NS.10	Use reasoning involving rates and ratios to model real-world and other mathematical problems (e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations).	Solve time and distance problems (whole numbers).	SMMA_LO_00842
		Solve a proportion problem in context.	SMMA_LO_01284
		Determine the number of calories in multiple servings given data in a chart.	SMMA_LO_01333
		Given the number of kilowatt-hours used and a price, find the total cost of power.	SMMA_LO_01336
		Convert light years to kilometers and kilometers to light years.	SMMA_LO_01339
		Given the rate and time, find the distance.	SMMA_LO_01575
		Estimate the distance by rounding (d = rt).	SMMA_LO_01606
		Find the number of hours worked given the hourly rate and total earned.	SMMA_LO_01625
		Find the total money earned, given the number of hours worked and the hourly rate.	SMMA_LO_01630
		Generate a table of values given a one-step rule.	SMMA_LO_01755
		Complete a comparison statement based on the ratios in two tables.	SMMA_LO_02116
7.AF.1	Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process.	Identify -(a - b) as equivalent to -a + b (a and b from 1 to 9).	SMMA_LO_01523
		Identify -(-a - b) as equivalent to a + b (a and b from 1 to 9).	SMMA_LO_01524
		Identify a x (b - c) as equivalent to (a x b) - (a x c) with variables.	SMMA_LO_01533
		Identify a x (b - c) as equivalent to (a x b) - (a x c).	SMMA_LO_01534
		Apply the properties of operations to generate equivalent expressions.	SMMA_LO_02059

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7.AF.1	Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring (e.g., given 2x - 10, create an equivalent expression 2(x - 5)). Justify each step in the process.	Apply properties of operations to add two linear expressions.	SMMA_LO_02149
		Rewrite an expression from context by factoring and combining like terms.	SMMA_LO_02150
7.AF.2	Solve equations of the form px + q= r and p(x + q) = r fluently, where p, q, and r are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems.	Complete the steps to solve for x in ax ÷ b = c in steps.	SMMA_LO_00382
		Solve for x in –x = a (numbers from –99 to 99).	SMMA_LO_00395
		Complete the steps to solve for x in a - x = b.	SMMA_LO_00396
		Determine whether a given value for x is a solution for ax + b = c (x is from –9 to 9).	SMMA_LO_00397
		Solve for a two-step equation in context.	SMMA_LO_01638
		Solve for a, b, or c in a × b/c = d/e (combinations to 12 × 12).	SMMA_LO_01798
		Solve a one-step equation (multiplication and division, integers).	SMMA_LO_01800
		Solve a one-step equation (addition and subtraction, one-digit integers).	SMMA_LO_01801
		Solve a two-step equation (fractions, multiplication).	SMMA_LO_01850
		Solve a two-step equation (decimals).	SMMA_LO_01851
		R: Complete a table given a two-step rule (single-digit whole numbers).	SMMA_LO_01750
		R: Complete a table given a two-step rule (whole numbers).	SMMA_LO_01751
		R: Generate a table of values given a two-step rule.	SMMA_LO_01756
		R: Complete an input/output table given a two-step rule; then plot the ordered pairs on coordinate grid.	SMMA_LO_01758
7.AF.3	Solve inequalities of the form px +q (> or ≥) r or px + q (< or ≤) r, where p, q, and r are specific rational numbers. Represent real-world problems using inequalities of these forms and solve such problems. Graph the solution set of the inequality and interpret it in the context of the problem.	Write an inequality of the form px + q > r or px + q < r to represent a constraint in a real-world problem.	SMMA_LO_02083
		Solve an inequality of the form px + q > r or px + q < r; then graph the solution on a number line.	SMMA_LO_02084
7.AF.4	Define slope as vertical change for each unit of horizontal change and recognize that a constant rate of change or constant slope describes a linear function. Identify and describe situations with constant or varying rates of change.	Use similar triangles to explain why the slope m is the same between any two distinct points on a nonvertical line in the coordinate plane.	SMMA_LO_02075
		Derive the equation y = mx for a line through the origin, and y = mx + b for a line intercepting the vertical axis at b.	SMMA_LO_02076

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7.AF.7	Identify the unit rate or constant of proportionality in tables, graphs, equations, and verbal descriptions of proportional relationships.	Identify the unit rate given a table, a graph, an equation, a diagram, or a word problem.	SMMA_LO_02001
		Identify the constant of proportionality given a table, a graph, an equation, a diagram, or a word problem.	SMMA_LO_02002
		Compare a proportional relationship represented as a graph to a proportional relationship represented as a table.	SMMA_LO_02074
7.AF.8	Explain what the coordinates of a point on the graph of a proportional relationship mean in terms of the situation, with special attention to the points (0, 0) and (1,r), where r is the unit rate.	Interpret the meaning of a point on the graph of a proportional relationship in terms of the situation; use this information to answer questions about the situation.	SMMA_LO_02089
7.AF.9	Identify real-world and other mathematical situations that involve proportional relationships. Write equations and draw graphs to represent proportional relationships and recognize that these situations are described by a linear function in the form y = mx, where the unit rate, m, is the slope of the line.	Graph proportional relationships and interpret the unit rate as the slope of the graph.	SMMA_LO_02073
		Use similar triangles to explain why the slope m is the same between any two distinct points on a nonvertical line in the coordinate plane.	SMMA_LO_02075
		Derive the equation y = mx for a line through the origin, and y = mx + b for a line intercepting the vertical axis at b.	SMMA_LO_02076
7.C.1	Understand p + q as the number located a distance |q| from p, in the positive or negative direction, depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	Find the missing one-digit addend in a number sentence (positive or negative integers, sums are 0).	SMMA_LO_00102
		Identify an equivalent expression of commutativity for addition of integers.	SMMA_LO_00114
		Identify an equivalent expression with integers (four one-digit addends).	SMMA_LO_00117
		Find the sum of four integers when two are additive inverses (a, b, c, and d have absolute values 1 to 20).	SMMA_LO_00119
		Identify an equivalent expression for a x (b + c) with variables.	SMMA_LO_00129
		Find a missing number in an arithmetic sequence (-200 to 200, intervals 3 to 8).	SMMA_LO_01115
		Represent addition and subtraction of rational numbers on a number line.	SMMA_LO_02085
7.C.2	Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	Locate an integer on the number line (differences -5 to 1).	SMMA_LO_01505
		Subtract integers using a number line.	SMMA_LO_01511
		Identify a - b as equivalent to a + (-b), where a and b are 1 to 20.	SMMA_LO_01514
		Identify -a - b as equivalent to -a + (-b) (minuends -20 to -1).	SMMA_LO_01515
		Identify a - (-b) as equivalent to a + b (minuends 1 to 10).	SMMA_LO_01517
		Identify -a - (-b) as equivalent to -a + b (minuends and subtrahends -9 to 9).	SMMA_LO_01521
		Identify -(a - b) as equivalent to -a + b with variables.	SMMA_LO_01529
		Identify -(-a - b) as equivalent to a + b with variables.	SMMA_LO_01530

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7.C.2	Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	Evaluate the expression -(a - b), where a and b have values from 1 to 9.	SMMA_LO_01531
		Evaluate the expression -(-a - b), where a and b have values from 1 to 9.	SMMA_LO_01532
		Represent subtraction of integers on a number line.	SMMA_LO_02152
		Represent addition and subtraction of rational numbers (fractions) on a number line.	SMMA_LO_02153
		Represent addition and subtraction of rational numbers (decimals) on a number line.	SMMA_LO_02154
7.C.3	Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers.	Identify -(a + b) as equivalent to -a - b, where a and b are 1 to 9.	SMMA_LO_00118
		Identify an equivalent variable expression (-(a + b) = -a + (-b)).	SMMA_LO_00124
		Read and interpret a horizontal or vertical pictograph (four to six items).	SMMA_LO_00131
		Determine the sign of the products of two integers (one and two-digit integers).	SMMA_LO_00916
		Determine the sign of the product of four factors.	SMMA_LO_00919
		Identify -a - (-b) as equivalent to -a + b (minuends and subtrahends -9 to 9).	SMMA_LO_01521
7.C.4	Understand that integers can be divided, provided that the divisor is not zero, and that every quotient of integers (with non-zero divisor) is a rational number. Understand that if p and q are integers, then –(p/q) = (–p)/q = p/(–q).	Identify fractions that are equivalent to a given negative fraction.	SMMA_LO_02087
		Interpret quotients of rational numbers by describing real-world contexts.	SMMA_LO_02088
7.C.6	Use proportional relationships to solve ratio and percent problems with multiple operations, such as the following: simple interest, tax, markups, markdowns, gratuities, commissions, fees, conversions within and across measurement systems, percent increase and decrease, and percent error.	Find the total cost, given an amount and the sales tax percentage.	SMMA_LO_00178
		Find the percent of increase.	SMMA_LO_00278
		Identify a correct expression to solve a problem about sales tax.	SMMA_LO_00845
		Solve a problem in context using proportions.	SMMA_LO_01635
		Find the number of grams that represents a percentage of the total weight (whole numbers).	SMMA_LO_01636
		Find total earnings for two to four weeks given the weekly salary, commission percentage, and total sales (whole number percents).	SMMA_LO_01637
		Solve for a variable in the formula for simple interest (whole numbers and decimals).	SMMA_LO_01805
		R: Find a percent of a money amount ($0.80 to $10.80).	SMMA_LO_00270
		R: Find a percent of a number (the percent is greater than or equal to 100).	SMMA_LO_00275
		R: Find the percent given the whole and the part.	SMMA_LO_00276
		R: Find the whole given the percent and the part.	SMMA_LO_00277

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7.C.7	Compute with rational numbers fluently using a standard algorithmic approach.	Find the missing two-digit addend in a number sentence (sums are 0).	SMMA_LO_00103
		Find the missing two-digit addend in a number sentence (sums are 0).	SMMA_LO_00104
		Find the missing negative addend in a number sentence (sums 1 to 8).	SMMA_LO_00105
		Add two negative integers (sums -20 to 0).	SMMA_LO_00107
		Add a positive and a negative integer (one-digit addends, sums -9 to 9).	SMMA_LO_00108
		Add two integers using addition facts (addends -10 to 10, sums -20 to 20).	SMMA_LO_00109
		Find the missing addend in a number sentence (missing addends -10 to 10, sums -20 to 20).	SMMA_LO_00110
		Add three integers (sum -10 to 10).	SMMA_LO_00111
		Add integers in an associative expression ((a + b) + c, three addends -10 to 10).	SMMA_LO_00113
		Identify -(a + b) as equivalent to -a + (-b), where a and b are 1 to 9.	SMMA_LO_00115
		Identify -(a + b) as equivalent to -a - b, where a and b are 1 to 9.	SMMA_LO_00116
		Add two integers (-20 to 20).	SMMA_LO_00121
		Find the missing addend in a number sentence (sums -20 to 20).	SMMA_LO_00122
		Find the missing addend in a number sentence (three addends, -10 to 10).	SMMA_LO_00123
		Evaluate -(-a + b), where 1 < a, b < 9.	SMMA_LO_00128
		Find the missing dividend or divisor (combinations 2 x 13 to 5 x 19).	SMMA_LO_00309
		Finding the missing dividend or divisor (combinations 6 x 13 to 9 x 19).	SMMA_LO_00310
		Divide integers (combinations 6 x 10 to -9 x 12, dividend or divisor is negative).	SMMA_LO_00316
		Divide integers (combinations 4 x 6 to 12 x 12).	SMMA_LO_00317
		Divide integers (combinations 6 x 13 to 9 x 19, all signs).	SMMA_LO_00319
		Find the missing dividend or divisor in a number sentence (combinations 7 x 13 to 9 x 19, all signs).	SMMA_LO_00320
		Solve for a, b, or c in a/b ÷ c = d/e (combinations to 12 × 12).	SMMA_LO_00375
		Solve for a, b, c, or d in a/b ÷ c/d = e/f.	SMMA_LO_00377
		Multiply a negative integer by a positive integer (products -144 to -4).	SMMA_LO_00914
		Multiply two negative integers (products 4 to 144).	SMMA_LO_00915
		Multiply a negative integer by a positive integer (products -(20 × 2) to -(90 × 9)).	SMMA_LO_00917
		Find the missing positive or negative factor in a number sentence.	SMMA_LO_00918
		Multiply three integers (one-digit factors with absolute values 2 to 10).	SMMA_LO_00920
		Subtract integers (minuends 0 to 10, subtrahends 1 to 10, differences negative).	SMMA_LO_01506

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7.C.7	Compute with rational numbers fluently using a standard algorithmic approach.	Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).	SMMA_LO_01507
		Subtract integers (minuends 0 to 19, subtrahends 1 to 20, negative differences).	SMMA_LO_01508
		Find the missing subtrahend in a number sentence (minuends 0 to 10, subtrahends 2 to 11, negative differences).	SMMA_LO_01509
		Subtract integers (minuends 0 to 20, subtrahends 1 to 40).	SMMA_LO_01510
		Subtract integers (minuends -20 to -10, subtrahends 0 to 10).	SMMA_LO_01513
		Subtract integers (minuends -20 to 20, subtrahends 0 to -20).	SMMA_LO_01516
		Subtract an integer from 0 (subtrahends -20 to 20).	SMMA_LO_01519
		Subtract integers (minuends 0 to 20, subtrahends -10 to -1).	SMMA_LO_01520
		Subtract integers (minuends -10 to 0, subtrahends -10 to -1).	SMMA_LO_01522
		Subtract integers (minuends -10 to 10, subtrahends -10 to 10).	SMMA_LO_01525
		Subtract integers (minuends -20 to 20, subtrahends -20 to 20).	SMMA_LO_01526
		Evaluate a numerical expression (a) + (b) - (c), where a, b, and c have values from -9 to 9.	SMMA_LO_01527
		Compare sums and difference of positive and negative integers (-5 to 5).	SMMA_LO_01528
		Evaluate an algebraic expression with exponents (integers -10 to 10).	SMMA_LO_01818
		Evaluate an algebraic expression (integers -10 to 10).	SMMA_LO_01842
		Evaluate an algebraic expression with three variables (-5.9 to 5.9).	SMMA_LO_01843
		R: Determine if the sum is positive or negative (one- and two-digit addends).	SMMA_LO_00106
		R: Find the missing subtrahend in a number sentence (minuends -9 to 0, differences -9 to 0).	SMMA_LO_01512
7.C.8	Solve real-world problems with rational numbers by using one or two operations.	Solve a two-step addition problem to find a person's age 5 to 20 years from now.	SMMA_LO_01631
		Find the final temperature given the initial temperature and the temperature increase.	SMMA_LO_01632
7.DSP.2	Use data from a random sample to draw inferences about a population. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.	Make predictions based on a sample.	SMMA_LO_01223

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IN Standard	IN Standard Text	Item Description	Item ID
7.DSP.3	Find, use, and interpret measures of center (mean and median) and measures of spread (range, interquartile range, and mean absolute deviation) for numerical data from random samples to draw comparative inferences about two populations.	Find and compare the average variation of two sets of data.	SMMA_LO_01221
7.DSP.5	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Understand that a probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. Understand that a probability of 1 indicates an event certain to occur and a probability of 0 indicates an event impossible to occur.	Using a graphical representation of an urn and a set of balls of two colors, modify a random experiment so that the qualitative probability of getting one color is greater than that of getting the other color.	SMMA_LO_01161
		Given a graphical representation of an urn containing balls of three colors, determine qualitatively which event is more probable to occur.	SMMA_LO_01163
		Given the graphical representation of a bowl containing marbles of two colors, represent on a qualitative ordinal scale the probability of an event (6 to 11 marbles in the bowl).	SMMA_LO_01165
		Express an event as a ratio of the number of favorable outcomes to the total number of outcomes (bowl containing marbles of two colors).	SMMA_LO_01179
		Determine the probability of an event.	SMMA_LO_01197
		Using a graphical representation of a bowl containing marbles of four colors, begin to apply the addition rule for computing the probabilities of inclusive classes using light and dark colored marbles.	SMMA_LO_01203
		Given a graphical representation of a spinner partitioned into sectors of different sizes, each containing one of several possible pictures, label events as certain or impossible or pairs of events as more, less, or equally likely.	SMMA_LO_01212
		Write a fraction to express the probability of an event.	SMMA_LO_01667
		R: Determine whether a chronological event is certain or impossible.	SMMA_LO_01137
		R: Given information about a current situation, classify a future event as being certain, possible, or impossible.	SMMA_LO_01139
		R: Given a sentence describing an observed event, label a future occurrence as certain, possible, or impossible.	SMMA_LO_01143
		R: Within the context of selecting without replacement from a cup containing three balls, each of a different color, label a given event prior to each selection as certain, possible, or impossible.	SMMA_LO_01147

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7.DSP.5	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Understand that a probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. Understand that a probability of 1 indicates an event certain to occur and a probability of 0 indicates an event impossible to occur.	R: Create a set of colored balls whose contents are specified by whether it is certain, possible, or impossible to select a particular color.	SMMA_LO_01153
		R: Given a graphical representation of an urn containing balls of three colors, determine qualitatively which event is more probable to occur (5 to 8 times as many balls of one color as of the other color).	SMMA_LO_01157
		R: Given a graphical representation of an urn containing balls of two colors, determine qualitatively which color is more probable to be randomly selected (2 to 4 times as many balls of one color as of the other color).	SMMA_LO_01159
7.DSP.6	Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its relative frequency from a large sample.	Determine the event that is most or least likely; then conduct a simulation in which the results are recorded so that theoretical and experimental probability can be compared.	SMMA_LO_01738
		R: Given a graphical representation of a bowl containing marbles of two colors, represent on a qualitative ordinal scale the probability of an event and its complement.	SMMA_LO_01171
		R: Given a graphical representation of two urns containing different compositions of balls of two colors, select the urn in which an event is qualitatively determined to have a high probability.	SMMA_LO_01173
7.DSP.7	Develop probability models that include the sample space and probabilities of outcomes to represent simple events with equally likely outcomes. Predict the approximate relative frequency of the event based on the model. Compare probabilities from the model to observed frequencies; evaluate the level of agreement and explain possible sources of discrepancy.	Given a random experiment represented graphically by a spinner, prepare an equivalent random experiment using a representation based on an urn and colored balls.	SMMA_LO_01200
		In the context of randomly selecting a card that has one of two pictures on it, compute the probability of each picture being selected from a set of cards (total of 4 to 7 cards).	SMMA_LO_01211
		In the context of randomly selecting a card that has a certain name on it, compute the probability of each name being selected from a set of cards.	SMMA_LO_01215
		Given a graphical representation of two spinners, select the spinner for which a given event has the highest probability of occurring.	SMMA_LO_01216
		Given a coordinate grid to represent outcomes of tossing a pair of number cubes, identify the point that represents a given pair of outcomes.	SMMA_LO_01218
		Given a coordinate grid to represent outcomes of tossing a pair of number cubes, identify all points that represent the sum given for a pair of outcomes.	SMMA_LO_01219
		Given information about a situation in which items are selected from a container without replacement, label the probabilities of given outcomes in a first and second selection.	SMMA_LO_01226

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IN Standard	IN Standard Text	Item Description	Item ID
7.GM.2	Identify and describe similarity relationships of polygons including the angle-angle criterion for similar triangles, and solve problems involving similarity.	Determine whether or not a diagram gives enough information to determine whether or not two triangles are similar. If so, identify the triangles as similar or not similar.	SMMA_LO_02130
		R: Match the corresponding sides or angles of two similar figures.	SMMA_LO_00673
7.GM.3	Solve real-world and other mathematical problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing. Create a scale drawing by using proportional reasoning.	Identify the scale factor in similar shapes to find the missing corresponding sides.	SMMA_LO_00513
		Determine distances from scale drawings (inches to miles, cm to km).	SMMA_LO_00815
		Interpret scale drawings (metric and customary units of length).	SMMA_LO_00846
7.GM.4	Solve real-world and other mathematical problems that involve vertical, adjacent, complementary, and supplementary angles.	Establish that vertical angles are congruent.	SMMA_LO_00670
		Arrange statements to write a proof of a fact about either the angle sum or the exterior angle of a triangle.	SMMA_LO_02126
7.GM.5	Understand the formulas for area and circumference of a circle and use them to solve real-world and other mathematical problems; give an informal derivation of the relationship between circumference and area of a circle.	Find the circumference, given the length of the diameter or the radius (pi = 3.14).	SMMA_LO_00828
		Measure the diameter of a circle, and then determine the circumference.	SMMA_LO_01779
		Measure the radius of a circle, and then determine the circumference.	SMMA_LO_01780
		Measure the diameter of a circle, and then determine the area.	SMMA_LO_01781
		Measure the radius of a circle, and then determine the area.	SMMA_LO_01783
		Determine the most accurate representation of the circumference of a circle.	SMMA_LO_01784
		Given the radius, find the circumference of a circle within context.	SMMA_LO_01855
		Given the diameter, find the circumference of a circle within context.	SMMA_LO_01856
		R: Estimate the area of a figure on a grid (3 to 11 square units).	SMMA_LO_00808
7.GM.6	Solve real-world and other mathematical problems involving volume of cylinders and three-dimensional objects composed of right rectangular prisms.	Use a formula to find the volume of a cylinder.	SMMA_LO_00839
		Solve for a variable in the formula for volume of a rectangular prism (whole numbers and mixed numbers).	SMMA_LO_01817
7.GM.7	Construct nets for right rectangular prisms and cylinders and use the nets to compute the surface area; apply this technique to solve real-world and other mathematical problems.	Generalize a figure for surface area, and then use that formula to find the surface area of a given figure.	SMMA_LO_02144
7.NS.1	Find the prime factorization of whole numbers and write the results using exponents.	Identify the prime factorization of a two-digit number.	SMMA_LO_01093
		R: Using a factor tree, find the prime factors of a number (2 to 32).	SMMA_LO_01087
7.NS.2	Understand the inverse relationship between squaring and finding the square root of a perfect square integer. Find square roots of perfect square integers.	Find the square root of a number using a calculator (numbers to 4000).	SMMA_LO_01120

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8.AF.1	Solve linear equations with rational number coefficients fluently, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. Represent real-world problems using linear equations and inequalities in one variable and solve such problems.	Complete the steps to solve for x in ax + b = c.	SMMA_LO_00383
		Solve for x in ax + b = c.	SMMA_LO_00384
		Complete the steps to solve for x in ax + b = c (x is from -9 to -1).	SMMA_LO_00392
		Complete the steps to solve for x in ax - b = c (x is from -9 to 2).	SMMA_LO_00393
		Complete the steps to solve for x in ax - b = c (x is from -9 to 9).	SMMA_LO_00394
		Solve a two-step equation (integers).	SMMA_LO_01846
		Generate and solve an equation with variables on both sides of the equal sign in a real-world context.	SMMA_LO_02145
		R: Determine whether the given values for x and y satisfy y = ax + b.	SMMA_LO_00398
8.AF.2	Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by transforming a given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).	Transform a given multi-step equation into a simpler form.	SMMA_LO_02079
8.AF.3	Understand that a function assigns to each x-value (independent variable) exactly one y-value (dependent variable), and that the graph of a function is the set of ordered pairs (x,y).	Identify the addition or subtraction rule of the function.	SMMA_LO_01682
		Identify the multiplication or division rule of the function.	SMMA_LO_01684
		Identify the one-step rule in the relation or function (multiplication and division).	SMMA_LO_01723
		Generate a table of values given a rule.	SMMA_LO_01724
		Complete an input/output table given a one-step rule; then plot the ordered pairs on a coordinate grid.	SMMA_LO_01757
		Given a list of ordered pairs of a relation, identify two ordered pairs that show the relation is not a function.	SMMA_LO_01811
		Given a graph of a relation, identify two ordered pairs on the graph that show the relation is not a function.	SMMA_LO_01812
		Given a set of graphs of relations, identify which graphs represent functions.	SMMA_LO_01835
		Complete a table of values and graph the equation of a quadratic function.	SMMA_LO_01836
		Complete a table of values and graph the equation of a linear function.	SMMA_LO_01837
		R: Identify the one-step rule in the relation or function (addition and subtraction).	SMMA_LO_01722

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IN Standard	IN Standard Text	Item Description	Item ID
8.AF.4	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear, has a maximum or minimum value). Sketch a graph that exhibits the qualitative features of a function that has been verbally described.	Identify whether graphs are linear or exponential.	SMMA_LO_01830
8.AF.5	Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. Describe similarities and differences between linear and nonlinear functions from tables, graphs, verbal descriptions, and equations.	Identify if an equation is a linear or exponential function.	SMMA_LO_01828
		Identify if an equation is a linear or quadratic function.	SMMA_LO_01829
		Identify whether graphs are linear or quadratic.	SMMA_LO_01831
		Identify whether graphs are linear or nonlinear.	SMMA_LO_01832
		Identify if an equation is a linear or nonlinear function.	SMMA_LO_01833
		Determine if a table values represents a linear or nonlinear function.	SMMA_LO_01834
		Determine if a table values represents a linear or exponential function.	SMMA_LO_01881
		Determine if a table values represents a linear or quadratic function.	SMMA_LO_01882
		Identify the function that is represented by a table of values (linear and nonlinear).	SMMA_LO_01883
8.AF.6	Construct a function to model a linear relationship between two quantities given a verbal description, table of values, or graph. Recognize in y = mx + b that m is the slope (rate of change) and b is the y-intercept of the graph, and describe the meaning of each in the context of a problem.	Given a table of values for x and y, identify a true equation.	SMMA_LO_00399
		Identify a two-step expression to describe the pattern generated by a table (input = 100).	SMMA_LO_01752
		Identify a two-step expression to describe the pattern generated by a table (input = 1000).	SMMA_LO_01753
		Complete an input/output table and identify the algebraic equation that describes the one-step rule.	SMMA_LO_01806
		Complete an input/output table and identify the algebraic equation that describes the two-step rule.	SMMA_LO_01807
8.AF.7	Compare properties of two linear functions given in different forms, such as a table of values, equation, verbal description, and graph (e.g., compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed).	Identify the equation that translates the written phrase (ax + b = c).	SMMA_LO_00385
		Identify the equation that translates the written phrase (ax + b = c).	SMMA_LO_00386
		Identify the one-step equation that is a translation of the written phrase within a context.	SMMA_LO_01813
		Identify the two-step equation that is a translation of the written phrase within a context.	SMMA_LO_01814
		Identify the equation translated from a written phrase.	SMMA_LO_01852
		Identify the inequality translated from a written phrase.	SMMA_LO_01853
		Identify the written phrase translated from an inequality.	SMMA_LO_01869

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8.AF.7	Compare properties of two linear functions given in different forms, such as a table of values, equation, verbal description, and graph (e.g., compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed).	Identify the written phrase translated from an inequality.	SMMA_LO_01870
		Compare a proportional relationship represented as a graph to a proportional relationship represented as a table.	SMMA_LO_02074
		Identify the rate of change and the y-intercept of two linear functions, one represented graphically, and one represented either algebraically or in a table.	SMMA_LO_02101
		Identify the rate of change and the y-intercept of two linear functions, one represented in a verbal description, and one represented either graphically or algebraically.	SMMA_LO_02102
		Identify the rate of change and the y-intercept of two linear functions, one represented in a table, and one represented either algebraically or in a verbal description.	SMMA_LO_02103
8.AF.8	Understand that solutions to a system of two linear equations correspond to points of intersection of their graphs because points of intersection satisfy both equations simultaneously. Approximate the solution of a system of equations by graphing and interpreting the reasonableness of the approximation.	Identify the solution to a system of linear equations by locating the point of intersection on its graph.	SMMA_LO_02080
		If a system of linear equations has 0 or infinitely many solutions, solve it by inspection. If it has 1 solution, solve it either algebraically or by graphing.	SMMA_LO_02133
		Model a real-world problem with a system of linear equations. Then solve it by locating the intersection point of the graphs of the two equations.	SMMA_LO_02134
8.C.1	Solve real-world problems with rational numbers by using multiple operations.	Identify an equation that can be used to solve a two-step problem in context.	SMMA_LO_01297
8.C.2	Solve real-world and other mathematical problems involving numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Interpret scientific notation that has been generated by technology, such as a scientific calculator, graphing calculator, or excel spreadsheet.	Express a number in scientific notation (exponents 1 to 6).	SMMA_LO_01113
		Given the scientific notation, determine the standard notation of a number (the power of 10 has an exponent of 1 to 6).	SMMA_LO_01121
		Find the missing exponent for a number written in scientific notation (the exponent is 1 to 6).	SMMA_LO_01122
		Write very small numbers in scientific notation.	SMMA_LO_02070
		Write very large numbers in scientific notation.	SMMA_LO_02071
		Compare numbers written in scientific notation.	SMMA_LO_02072
8.DSP.1	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantitative variables. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	Identify positive, negative, or no association for sets of actual data.	SMMA_LO_01222

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8.DSP.3	Write and use equations that model linear relationships to make predictions, including interpolation and extrapolation, in real-world situations involving bivariate measurement data; interpret the slope and y-intercept.	R: Choose an approximation based on a trend line for bivariate data.	SMMA_LO_02143
8.DSP.4	Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. Understand and use appropriate terminology to describe independent, dependent, complementary, and mutually exclusive events.	Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.	SMMA_LO_01224
		R: Given a graphical representation of a spinner, count the number of possible outcomes and complete a list of all the outcomes.	SMMA_LO_01209
8.DSP.5	Represent sample spaces and find probabilities of compound events (independent and dependent) using methods, such as organized lists, tables, and tree diagrams.	Given a coordinate grid to represent outcomes of tossing a pair of number cubes, compute theoretical probability of an event defined by the sum of a pair of outcomes.	SMMA_LO_01220
		R: Given a graphical representation of two spinners, count all the possible outcomes for spinning each spinner once.	SMMA_LO_01665
		R: Determine the number of arrangements that can be made from two groups with two items.	SMMA_LO_01717
		R: Determine the arrangements that can be made with a group of two and a group of three items.	SMMA_LO_01718
		R: Determine the number of routes between two locations on a map.	SMMA_LO_01737
8.DSP.6	For events with a large number of outcomes, understand the use of the multiplication counting principle. Develop the multiplication counting principle and apply it to situations with a large number of outcomes.	Determine the number of arrangements that can be made from two groups with two items.	SMMA_LO_01717
		Determine the arrangements that can be made with a group of two and a group of three items.	SMMA_LO_01718
8.GM.1	Identify, define and describe attributes of three-dimensional geometric objects (right rectangular prisms, cylinders, cones, spheres, and pyramids). Explore the effects of slicing these objects using appropriate technology and describe the two-dimensional figure that results.	Identify faces, edges, and vertices of solids.	SMMA_LO_00632
		Count the vertices, edges, or faces of a prism or pyramid.	SMMA_LO_00643
		Complete sentences about bases, faces, edges, and vertices of geometric solids.	SMMA_LO_00652
		Identify the set of faces for a geometric solid.	SMMA_LO_00664
		Identify the cross section of a three-dimensional figure.	SMMA_LO_00668
		Identify the net for a geometric solid.	SMMA_LO_00675
		Identify the net that forms a three-dimensional solid.	SMMA_LO_01772
		R: Identify geometric solids (prisms, pyramids, cones, or spheres).	SMMA_LO_00667

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8.GM.2	Solve real-world and other mathematical problems involving volume of cones, spheres, and pyramids and surface area of spheres.	Use a formula to find the surface area of a cylinder or sphere.	SMMA_LO_00840
		Use a formula to find the volume of a cone or a sphere.	SMMA_LO_00844
8.GM.3	Verify experimentally the properties of rotations, reflections, and translations, including: lines are mapped to lines, and line segments to line segments of the same length; angles are mapped to angles of the same measure; and parallel lines are mapped to parallel lines.	Identify a figure as a slide, reflection (flip), or turn of another figure.	SMMA_LO_00599
		Identify congruent angles.	SMMA_LO_00637
		Identify a set of geometric figures that show a reflection (flip).	SMMA_LO_00648
		Identify a reflection, a rotation, and a translation of a geometric figure.	SMMA_LO_00665
		Identify a transformation as a slide, flip, or a turn.	SMMA_LO_01776
		Rotate a figure by 90, 180, or 270 degrees clockwise or counterclockwise on a coordinate plane.	SMMA_LO_02104
		Reflect a figure on a coordinate plane over the x-axis, the y-axis, or the line y = x.	SMMA_LO_02105
		Translate a figure on a coordinate plane.	SMMA_LO_02120
		Rotate a figure on a coordinate plane; verify properties of the rotation.	SMMA_LO_02121
		Reflect a figure on a coordinate plane over the x-axis, the y-axis, or the line y = x; verify properties of the rotation.	SMMA_LO_02122
		Translate a figure on a coordinate plane; verify properties of the rotation.	SMMA_LO_02123
		In a figure in which parallel lines are cut by a transversal, identify the transformations that would line one angle up with another angle. Then, describe the relationship between the two angles.	SMMA_LO_02129
8.GM.4	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations. Describe a sequence that exhibits the congruence between two given congruent figures.	Identify the figure that is the same size and shape as a given figure.	SMMA_LO_00600
		Identify congruent figures on a geoboard.	SMMA_LO_00606
		Given two congruent figures, transform one figure so that it lines up with the other. Then, identify the sequence of transformations used.	SMMA_LO_02124
		In a figure in which parallel lines are cut by a transversal, identify the transformations that would line one angle up with another angle. Then, describe the relationship between the two angles.	SMMA_LO_02129
8.GM.5	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations. Describe a sequence that exhibits the similarity between two given similar figures.	Identify similar polygons.	SMMA_LO_00610
		Identify the polygon that is not similar to the others.	SMMA_LO_00645
		Identify the example that is a counterexample to a statement.	SMMA_LO_00649
		Identify similar triangles or rectangles on a geoboard.	SMMA_LO_00847

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8.GM.6	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	Reflect a figure, find the coordinates of the reflected figure, and describe the effect of the reflection on the coordinates.	SMMA_LO_02125
		Determine the algebraic expression used to find the coordinates of the image of a figure under a dilation with the origin as the center of dilation.	SMMA_LO_02142
		R: Determine the missing coordinate of a vertex of a triangle in a transformation.	SMMA_LO_01736
8.GM.7	Use inductive reasoning to explain the Pythagorean relationship.	Explain a proof of the Pythagorean Theorem.	SMMA_LO_02131
		Explain a proof of the converse of the Pythagorean Theorem.	SMMA_LO_02132
8.GM.8	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and other mathematical problems in two dimensions.	Find the measurement of the hypotenuse using the Pythagorean theorem. (2D)	SMMA_LO_01854
8.GM.9	Apply the Pythagorean Theorem to find the distance between two points in a coordinate plane.	Given two points on a coordinate grid, draw a right triangle whose hypotenuse connects the two points. Then use the Pythagorean Theorem to find the distance between the two points.	SMMA_LO_02100
8.NS.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, plot them approximately on a number line, and estimate the value of expressions involving irrational numbers.	Drag rational and irrational values to their correct positions on a number line.	SMMA_LO_02141
8.NS.3	Given a numeric expression with common rational number bases and integer exponents, apply the properties of exponents to generate equivalent expressions.	Multiply or divide two numbers with exponents (same base, exponents less than 18).	SMMA_LO_01104
		Find the missing exponent in a multiplication or division number sentence.	SMMA_LO_01111

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