



SuccessMaker[®]

Pennsylvania State Standards Alignments for Mathematics

Providing rigorous mathematics intervention
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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.K.A.1	Students acquire the knowledge and skills needed to: Know number names and write and recite the count sequence.	Enter the number shown (0 to 4).	SMMA_LO_00001
		Enter the number shown (5 to 9).	SMMA_LO_00002
		Enter the missing date on a calendar.	SMMA_LO_00700
		Enter the number shown (1 to 5).	SMMA_LO_00932
		Identify a number from a spoken number (1 to 5).	SMMA_LO_00937
		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
		Enter the number shown (1 to 9).	SMMA_LO_00942
		Identify a number from a spoken number (6 to 9).	SMMA_LO_00944
		Find the next number in a sequence, counting by 1's (1 to 9).	SMMA_LO_00948
		Find the number that comes before a given number, counting by 1's (1 to 9).	SMMA_LO_00949
		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 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
CC.2.1.K.A.2	Students acquire the knowledge and skills needed to: Apply one-to-one correspondence to count the number of objects.	Count two sets of objects to find the total (sums 2 to 4).	SMMA_LO_00003
		Match objects to show a one-to-one correspondence (2 to 5 objects).	SMMA_LO_00921
		Identify a set with the same number of objects as a given set (1 to 5 objects).	SMMA_LO_00922
		Move objects to show a one-to-one correspondence (1 to 5 objects).	SMMA_LO_00925
		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
		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
		Make a group with one to five objects.	SMMA_LO_00938
		Count objects not arranged in a row (6 to 9 objects).	SMMA_LO_00943
		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

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CC.2.1.K.A.2	Students acquire the knowledge and skills needed to: Apply one-to-one correspondence to count the number of objects.	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 number, model, or word with the same value (1 to 9).	SMMA_LO_00965
		Count objects by pairing each object with one number 1 to 10; determine how many objects there are.	SMMA_LO_02092
		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
CC.2.1.K.A.3	Students acquire the knowledge and skills needed to: Apply the concept of magnitude to compare number and quantities.	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
		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
		Create a set with the same, more, or fewer number of objects than a given group (1 to 9 objects).	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
		Find a missing number on a number line (0 to 9).	SMMA_LO_00961
		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
		Identify whole numbers on a number line that satisfy the inequality (0 to 10).	SMMA_LO_01023
CC.2.1.K.B.1	Students acquire the knowledge and skills needed to: Use place value to compose and decompose numbers within 19.	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

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CC.2.1.K.B.1	Students acquire the knowledge and skills needed to: Use place value to compose and decompose numbers within 19.	Compose numbers from 11 to 19 given ten ones and some further ones by using objects.	SMMA_LO_02095
		Decompose numbers 2–10 into pairs in more than one way by using objects.	SMMA_LO_02096
		Model the number that makes 10 when added to a given number from 1 to 9; then identify the number.	SMMA_LO_02097
CC.2.2.K.A.1	Students acquire the knowledge and skills needed to: Extend the concepts of putting together and taking apart to add and subtract within 10.	Count two sets of objects to find the total (sums 4 to 6).	SMMA_LO_00004
		Count two sets 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 (sums 1 to 5).	SMMA_LO_00010
		Add using basic math facts displayed horizontally (sums 2 to 5).	SMMA_LO_00011
		Add using basic math facts displayed horizontally (sums 6 to 10).	SMMA_LO_00013
		Add three addends (sums 2 to 5).	SMMA_LO_00026
		Add three addends (audio presentation, sums 3 to 5).	SMMA_LO_00027
		Add three addends (sums 6 to 10).	SMMA_LO_00028
		Add three addends displayed horizontally (sums 6 to 10).	SMMA_LO_00029
		Add zero to a number (sums 1 to 9).	SMMA_LO_00035
		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
		Find a number that is one fewer or one greater than a given number (1 to 9).	SMMA_LO_00962
		Find a number that is one less or one more than a given number (two-digit).	SMMA_LO_00984
		Identify a picture that represents an addition problem (sums 2 to 6).	SMMA_LO_01228
		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
		Identify a picture that represents a subtraction problem (minuends 5 to 10).	SMMA_LO_01235
		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 expression that represents a picture (minuends 2 to 9).	SMMA_LO_01414
		Subtract using basic math facts displayed horizontally (minuends 0 to 5).	SMMA_LO_01415

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CC.2.2.K.A.1	Students acquire the knowledge and skills needed to: Extend the concepts of putting together and taking apart to add and subtract within 10.	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
		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
		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
		CC.2.3.K.A.1	Students acquire the knowledge and skills needed to: Identify and describe two- and three-dimensional shapes.
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		
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 object modeled by a geometric figure.	SMMA_LO_00570		
Identify the figure that is not of a given type (rectangle or triangle).	SMMA_LO_00571		
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		
Sort two-dimensional and three-dimensional shapes.	SMMA_LO_01677		
CC.2.3.K.A.2	Students acquire the knowledge and skills needed to: Analyze, compare, create, and compose two- and three-dimensional shapes.	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
		Move puzzle pieces to complete a puzzle (2 pieces).	SMMA_LO_00534
		Match congruent irregular polygons.	SMMA_LO_00545

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CC.2.3.K.A.2	Students acquire the knowledge and skills needed to: Analyze, compare, create, and compose two- and three-dimensional shapes.	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 figure that is not of a given type (rectangle or triangle).	SMMA_LO_00571
		Identify a shape with positive and negative tests.	SMMA_LO_00578
		Identify open and closed figures.	SMMA_LO_00580
		Match complex congruent figures in different orientations.	SMMA_LO_00581
		Count the number of sides in a polygon.	SMMA_LO_00586
		Identify figures with more or fewer than a given number of sides.	SMMA_LO_00587
		Identify corners (vertices) of polygons.	SMMA_LO_00589
		Identify similar three-dimensional figures.	SMMA_LO_00592
		Match compound figures that have the same shape (different sizes).	SMMA_LO_00594
		Count the corners (vertices) of a polygon (3 to 7 corners).	SMMA_LO_00596
		Connect points on a geoboard to copy a figure.	SMMA_LO_00611
Identify the rectangle with the same size and shape as a given rectangle.	SMMA_LO_00736		
CC.2.4.K.A.1	Students acquire the knowledge and skills needed to: Describe and compare attributes of length, area, weight and capacity of everyday objects.	Match amounts of liquid in containers (3 amounts).	SMMA_LO_00689
		Identify the tallest object.	SMMA_LO_00694
		Identify the biggest or smallest object.	SMMA_LO_00695
		Identify the container with the greatest or least capacity.	SMMA_LO_00696
		Identify the object that is a different length.	SMMA_LO_00709
		Identify the object that is a different height.	SMMA_LO_00712
		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
CC.2.4.K.A.4	Students acquire the knowledge and skills needed to: Classify objects and count the number of objects in each category.	Identify the figure that is a different color from a given figure.	SMMA_LO_00541
		Identify the figure with a different shape.	SMMA_LO_00547
		Count the geometric figures in a picture.	SMMA_LO_00572
		Classify geometric figures by a shape attribute.	SMMA_LO_00576
		Identify a pair of objects that are not the same size.	SMMA_LO_00692
		Formulate questions around numerical data.	SMMA_LO_01642

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CC.2.4.K.A.4	Students acquire the knowledge and skills needed to: Classify objects and count the number of objects in each category.	R: Use logical reasoning to identify the item that does not belong in a group.	SMMA_LO_01227
		R: Sort two-dimensional and three-dimensional shapes.	SMMA_LO_01677
CC.2.1.1.B.1	Students acquire the knowledge and skills needed to: Extend the counting sequence to read and write numerals to represent objects.	Find the number of a set of objects (grouped tens and ones; two-digit).	SMMA_LO_00976
		Identify a written number from a spoken number (two-digit).	SMMA_LO_00977
		Show a number using base-ten blocks (two-digit).	SMMA_LO_00978
		Enter the number for a word name (two-digit).	SMMA_LO_01001
CC.2.1.1.B.2	Students acquire the knowledge and skills needed to: Use place-value concepts to represent amounts of tens and ones and to compare two digit numbers.	Compare numbers using $<$ or $>$ symbols (1 to 19).	SMMA_LO_00325
		Compare numbers using $<$ or $>$ symbols (20 to 99).	SMMA_LO_00328
		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
		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
		Find two numbers when given place value clues (two-digit).	SMMA_LO_00990
		Identify a two-digit number, model, or expression that has a different value.	SMMA_LO_00991
		Identify a number with a given digit in the ones or tens place.	SMMA_LO_00995
		Find a missing number for a point on a number line (two-digit).	SMMA_LO_00996
		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
		Find two numbers when given place value clues (two-digit).	SMMA_LO_01049
		Identify the value that is greater than one number and less than another in context.	SMMA_LO_01554
		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
		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
		R: Given a number (1-9) of objects, determine how many more objects are needed to make a ten.	SMMA_LO_02017

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CC.2.1.1.B.3	Students acquire the knowledge and skills needed to: Use place-value concepts and properties of operations to add and subtract within 100.	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 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 two multiples of 10 (student choice, sums 20 to 90).	SMMA_LO_00025
		Add four addends (one-digit addends, sums 3 to 10).	SMMA_LO_00030
		Add three addends (one-digit addends, sums 11 to 19).	SMMA_LO_00031
		Add three addends (one-digit addends, sums 10 to 19).	SMMA_LO_00032
		Add two addends (one- and two-digit addends, sums 11 to 99, no regrouping).	SMMA_LO_00033
		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 a multiple of 10 and a one-digit number displayed horizontally (sums 11 to 99).	SMMA_LO_00040
		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 three multiples of 10 (student choice, sums 30 to 90).	SMMA_LO_00043
		Add two multiples of 10 displayed horizontally (sums 20 to 90).	SMMA_LO_00044
		Add 9 to a number (sums 10 to 18).	SMMA_LO_00045
		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 (three addends, sums 1 to 9).	SMMA_LO_00052
		Add two addends (student choice, a one-digit and a two-digit addend, sums 20 to 98, regrouping).	SMMA_LO_00054
		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

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CC.2.1.1.B.3	Students acquire the knowledge and skills needed to: Use place-value concepts and properties of operations to add and subtract within 100.	Add two addends displayed horizontally (two-digit addends, sums 21 to 99).	SMMA_LO_00064
		Find the missing addend in a number sentence (three addends, sums 10 to 19).	SMMA_LO_00066
		Add two addends (student choice, two-digit addends, sums 30 to 98, regrouping).	SMMA_LO_00067
		Add three addends (student choice, one-digit addends, sums 20 to 27).	SMMA_LO_00069
		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
		Add three addends (student choice, one-digit and two-digit addends, sums 21 to 99, no regrouping).	SMMA_LO_00079
		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
		Add three addends (student choice, one- and two-digit addends, sums 30 to 98, regrouping).	SMMA_LO_00090
		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 the sum or difference when a two-digit number is added to or subtracted from a number (base-ten block models).	SMMA_LO_00989
		Identify a missing number in related addition and subtraction number sentences (two-digit sums, two-digit differences).	SMMA_LO_01060
		Use guess and check to solve an addition and subtraction problem (basic facts).	SMMA_LO_01240
		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

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CC.2.1.1.B.3	Students acquire the knowledge and skills needed to: Use place-value concepts and properties of operations to add and subtract within 100.	Subtract two multiples of 10 (student choice, minuends 20 to 90, subtrahends 10 to 80).	SMMA_LO_01426
		Subtract 1 from a number (two-digit minuends, no regrouping).	SMMA_LO_01427
		Subtract (student choice, minuends 21 to 95, subtrahends 1 to 9, no regrouping).	SMMA_LO_01428
		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
		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
		Subtract multiples of 10 (student choice, minuends 20 to 90, subtrahends 10 to 80).	SMMA_LO_01437
		Subtract multiples of 10 (minuends 20 to 90, subtrahends 10 to 80, horizontal presentation).	SMMA_LO_01438
		Subtract 10 from a two-digit number (student choice, minuends 11 to 19).	SMMA_LO_01441
		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
		Subtract (minuends 21 to 99, subtrahends 1 to 9, no regrouping).	SMMA_LO_01450
		Subtract a multiple of 10 from a 2-digit number (minuends 11-99, vertical presentation).	SMMA_LO_01452
		Subtract (student choice, minuends 21 to 99, no regrouping).	SMMA_LO_01454
		Subtract two numbers displayed horizontally (counting up strategy, minuends 21 to 98, subtrahends 2 to 9, regrouping).	SMMA_LO_01462
		Subtract two-digit numbers with regrouping (vertical presentation).	SMMA_LO_01463
		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
		Subtract two-digit numbers with regrouping (vertical presentation).	SMMA_LO_01473

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.1.B.3	Students acquire the knowledge and skills needed to: Use place-value concepts and properties of operations to add and subtract within 100.	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
		Explain how to solve an addition problem, either by using place value blocks or by rewriting the problem.	SMMA_LO_02012
		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
		Mentally find 10 more or 10 less than a given two-digit number; model the solution with place value blocks.	SMMA_LO_02020
CC.2.2.1.A.1	Students acquire the knowledge and skills needed to: Represent and solve problems involving addition and subtraction within 20.	Find the missing addend in a number sentence.	SMMA_LO_00037
		Find the missing addend in a number sentence (sums 10 to 18).	SMMA_LO_00048
		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
		Identify the operation from pictures and contexts (sums 6 to 9, minuends 6 to 9).	SMMA_LO_00321
		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
		Identify a missing number in an addition and subtraction fact family.	SMMA_LO_01035
		Use a picture to solve a missing addend problem (sums 2 to 6).	SMMA_LO_01232
		Choose the expression that can represent a problem with extra information; then solve (addition or subtraction).	SMMA_LO_01239
		Act out the problem to find the sum (basic facts).	SMMA_LO_01241
		Identify a number sentence that can be used to solve a problem with extra information (addition or subtraction, basic facts).	SMMA_LO_01242

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.2.1.A.1	Students acquire the knowledge and skills needed to: Represent and solve problems involving addition and subtraction within 20.	Identify a picture that represents a subtraction problem (one or two-digit).	SMMA_LO_01244
		Act out a problem to find the sum of three numbers (one-digit addends).	SMMA_LO_01249
		Identify the picture that can be used to solve an addition or subtraction problem.	SMMA_LO_01255
		Find the missing subtrahend in a subtraction number sentence (minuends 0 to 9).	SMMA_LO_01432
		Identify the number sentence that solves a subtraction problem in context (minuends 11 to 18, subtrahends 1 to 9).	SMMA_LO_01439
		Find the missing minuend in a subtraction number sentence (minuends 0 to 9).	SMMA_LO_01440
		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
		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
		Act out the solution to an addition problem in context (three addends, sums 1 to 9).	SMMA_LO_01537
		Act out the solution to multi-step problem in context (addends, minuends 1 to 4).	SMMA_LO_01538
		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 an addition problem with three addends in context (sums 3 to 10).	SMMA_LO_01549
		Solve a subtraction problem in context by finding how many more (minuends 2 to 5).	SMMA_LO_01550
		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
		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
		Solve an addition problem with three addends in context (sums 3 to 10).	SMMA_LO_01557
		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

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.2.1.A.1	Students acquire the knowledge and skills needed to: Represent and solve problems involving addition and subtraction within 20.	Identify and solve a number sentence for a subtraction problem in context (minuends 2 to 5).	SMMA_LO_01568
		Solve a problem in context by finding a missing addend (three addends, sums to 20).	SMMA_LO_01574
		Solve an addition problem in context (three addends, sums 9 to 18).	SMMA_LO_01576
		Solve for the unknown in an addition equation (addends and sums less than 16).	SMMA_LO_01656
		Create a fact family (addition and subtraction).	SMMA_LO_01857
		Identify the missing number (addend or sum) in an addition equation, for numbers 20 and less.	SMMA_LO_02010
		Determine if equations involving addition and subtraction are true or false.	SMMA_LO_02024
CC.2.2.1.A.2	Students acquire the knowledge and skills needed to: Understand and apply properties of operations and the relationship between addition and subtraction.	Find the missing addend in a number sentence.	SMMA_LO_00037
		Find the missing addend in a number sentence (sums 10 to 18).	SMMA_LO_00048
		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
		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
		Identify a missing number in an addition and subtraction fact family.	SMMA_LO_01035
		Find the missing subtrahend in a subtraction number sentence (minuends 0 to 9).	SMMA_LO_01432
		Find the missing minuend in a subtraction number sentence (minuends 0 to 9).	SMMA_LO_01440
		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
		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		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.2.1.A.2	Students acquire the knowledge and skills needed to: Understand and apply properties of operations and the relationship between addition and subtraction.	Solve for the unknown in an addition equation (addends and sums less than 16).	SMMA_LO_01656
		Create a fact family (addition and subtraction).	SMMA_LO_01857
		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
		Apply the Associative Property of Addition to add three numbers.	SMMA_LO_02135
CC.2.3.1.A.1	Students acquire the knowledge and skills needed to: Compose and distinguish between two- and three-dimensional shapes based on their attributes.	Match a plane figure to a geometric design that uses the figure.	SMMA_LO_00554
		Identify puzzle pieces needed to make a given shape, and then complete the puzzle (4 to 6 pieces).	SMMA_LO_00564
		Identify polygons and circles (pentagons, hexagons, octagons, parallelograms).	SMMA_LO_00627
CC.2.3.1.A.2	Students acquire the knowledge and skills needed to: Use the understanding of fractions to partition shapes into halves and quarters.	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
		Draw one to two segments to divide a figure into two to four congruent parts.	SMMA_LO_00640
CC.2.4.1.A.1	Students acquire the knowledge and skills needed to: Order lengths and measure them both indirectly and by repeating length units.	Match objects of the same height (3 heights).	SMMA_LO_00687
		Match objects of the same length (3 lengths).	SMMA_LO_00688
		Given 3 objects, Identify the shortest or longest object.	SMMA_LO_00693
		Identify the group of objects that is 1 to 5 nonstandard units long or tall.	SMMA_LO_00701
		Count to find how long or tall (2 to 9 nonstandard units).	SMMA_LO_00705
		Find the height (2 to 9 nonstandard units).	SMMA_LO_00710
		Count to find the height and width (2 to 5 nonstandard units).	SMMA_LO_00713
		Find the total length of two objects (nonstandard units, sums 2 to 5).	SMMA_LO_00720
		Estimate the height and width (2 to 5 nonstandard units).	SMMA_LO_00721
		Identify an object given the height and width in nonstandard units.	SMMA_LO_00725
		Find the distance between two objects (2 to 8 nonstandard units).	SMMA_LO_00732
		Measure the length of an object (2 to 7 nonstandard units).	SMMA_LO_00777
		Order three objects by length.	SMMA_LO_02147

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.4.1.A.2	Students acquire the knowledge and skills needed to: Tell and write time to the nearest half hour using both analog and digital clocks.	Identify the hour or minute hand of a clock.	SMMA_LO_00697
		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
CC.2.4.1.A.4	Students acquire the knowledge and skills needed to: Represent and interpret data using tables/charts.	Match each set of tally marks to a total (1 to 9).	SMMA_LO_00952
CC.2.1.2.B.1	Students acquire the knowledge and skills needed to: Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers.	Compare sums (two-digit addends, multiples of 10).	SMMA_LO_00334
		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
		Identify the number represented by a set of objects (pictorial models of hundreds, tens, and ones; three-digit).	SMMA_LO_01010
		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
		Identify the number, model, word name, or expanded notation that has a different value (three-digit).	SMMA_LO_01018
		Identify the greatest or least number (three-digit).	SMMA_LO_01019
		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
		Enter a three-digit number in a place-value chart (base-ten block models, three-digit).	SMMA_LO_01025
		Identify the greatest or least number (three-digit).	SMMA_LO_01026
		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
		Identify a set of numbers between two numbers, or less than or greater than a given number (101 to 999).	SMMA_LO_01068
		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

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.2.B.2	Students acquire the knowledge and skills needed to: Use place-value concepts to read, write and skip count to 1000.	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 10's (two-digit, non multiples of 10).	SMMA_LO_00992
		Find a missing number in a sequence, counting by 5's (5 to 50).	SMMA_LO_01003
		Find a missing number in a sequence, counting up or down by 5's (two-digit).	SMMA_LO_01004
		Identify the word name for a three-digit number.	SMMA_LO_01009
		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 numbers on a number line counting by 3's or 9's (3 to 81).	SMMA_LO_01034
		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
		Find the missing number in a sequence, counting by 5's or 10's.	SMMA_LO_01231
		R: Find a missing number in a sequence, counting by 2's (0 to 10).	SMMA_LO_00966
		CC.2.1.2.B.3	Students acquire the knowledge and skills needed to: Use place-value understanding and properties of operations to add and subtract within 1000.
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 addends (100 and a three-digit number, sums 200 to 900).	SMMA_LO_00057		
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 displayed horizontally (multiples of 10, sums 100 to 180, regrouping).	SMMA_LO_00068		
Add two addends (student choice, three-digit addends, sums 200 to 999, no regrouping).	SMMA_LO_00071		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.2.B.3	Students acquire the knowledge and skills needed to: Use place-value understanding and properties of operations to add and subtract within 1000.	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
		Find the missing addend in a number sentence (two addends, sums 100 to 199, regrouping).	SMMA_LO_00086
		Add three addends (student choice, one- and two-digit addends, sums 100 to 198, no regrouping).	SMMA_LO_00087
		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
		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
		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
		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
		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 100 from a three-digit number presented in a sentence.	SMMA_LO_01459
		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

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CC.2.1.2.B.3	Students acquire the knowledge and skills needed to: Use place-value understanding and properties of operations to add and subtract within 1000.	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		
		CC.2.2.2.A.1	Students acquire the knowledge and skills needed to: Represent and solve problems involving addition and subtraction within 100.	Find the difference between two numbers (two-digit, presented as a sentence).	SMMA_LO_01000
				Choose an operation to solve a problem with extra information; then solve (addition or subtraction, basic facts).	SMMA_LO_01247
Identify a number sentence that can be used to solve a problem with extra information (addition or subtraction, basic facts).	SMMA_LO_01250				
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				

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CC.2.2.2.A.1	Students acquire the knowledge and skills needed to: Represent and solve problems involving addition and subtraction within 100.	Solve a subtraction problem in context (two-digit minuends, one-digit subtrahends, no regrouping).	SMMA_LO_01563
		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
		Solve an addition problem in context (extra information, sums to 50, no regrouping).	SMMA_LO_01567
		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
CC.2.2.2.A.2	Students acquire the knowledge and skills needed to: Use mental strategies to add and subtract within 20.	Identify the missing number (minuend, subtrahend, or difference) in a subtraction equation, for numbers 20 and less.	SMMA_LO_02014
CC.2.2.2.A.3	Students acquire the knowledge and skills needed to: Work with equal groups of objects to gain foundations for multiplication.	Add doubles (sums 4 to 18).	SMMA_LO_00019
		Use repeated addition to multiply (products 2×2 to 5×5).	SMMA_LO_00852
		Solve addition and multiplication problems (products 2×1 to 2×5).	SMMA_LO_00853
		Solve addition and multiplication problems (products 2×6 to 2×9).	SMMA_LO_00854
CC.2.3.2.A.2	Students acquire the knowledge and skills needed to: Use the understanding of fractions to partition shapes into halves, quarters, and thirds.	Partition shapes into equal parts.	SMMA_LO_02000
		R: Match halves of figures (left and right).	SMMA_LO_00561
		R: Match halves of figures (top and bottom).	SMMA_LO_00563
CC.2.4.2.A.1	Students acquire the knowledge and skills needed to: Measure and estimate lengths in standard units using appropriate tools.	Measure the length of an object to the nearest inch (2 to 6 inches).	SMMA_LO_00703
		Identify an object given the estimated height and width in customary units.	SMMA_LO_00728
		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
		Identify a vertical distance (2 to 9 centimeters).	SMMA_LO_00758
		Measure the length of an object to the nearest centimeter (4 to 12 centimeters).	SMMA_LO_00762
		Identify the reasonable length of an object (inches, feet, and yards).	SMMA_LO_00780

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CC.2.4.2.A.1	Students acquire the knowledge and skills needed to: Measure and estimate lengths in standard units using appropriate tools.	Measure the length of an object in centimeters or inches (whole numbers).	SMMA_LO_00785
		Select the appropriate ruler to measure vertical or horizontal lengths.	SMMA_LO_00812
		Measure the length of an object in cm and inches; relate the two measurements to the sizes of the units.	SMMA_LO_02003
CC.2.4.2.A.2	Students acquire the knowledge and skills needed to: Tell and write time to the nearest five minutes using both analog and digital clocks.	Show time to 5-minute intervals using digital and analog clocks.	SMMA_LO_00744
		Identify another way to state the time (minutes before or after the hour).	SMMA_LO_00779
		Match digital times with descriptions (e.g., quarter to or quarter past).	SMMA_LO_00806
CC.2.4.2.A.3	Students acquire the knowledge and skills needed to: Solve problems and make change using coins and paper currency with appropriate symbols.	Determine the number of cents in 1 to 100 pennies, 1 to 20 nickels, or 1 to 10 dimes.	SMMA_LO_00143
		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
		Solve an addition problem by finding the total cost of two items (prices expressed as decimals, total < \$0.50, no regrouping).	SMMA_LO_00181
		Write the value of a set of dimes in dollar form (\$1.10 to \$3.90).	SMMA_LO_00183
		Identify nickels or dimes.	SMMA_LO_00698
		Enter the amount of money shown (1 to 5 cents in pennies).	SMMA_LO_00699
		Identify the coin worth 1, 5, 10, or 25 cents.	SMMA_LO_00702
		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
		Identify the coin equivalent to 5, 10, or 25 pennies.	SMMA_LO_00727
		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
		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
		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

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.4.2.A.3	Students acquire the knowledge and skills needed to: Solve problems and make change using coins and paper currency with appropriate symbols.	Write the value of a set of coins as a decimal amount (\$1.00 to \$3.20).	SMMA_LO_00784
		Identify items that can be purchased for a nickel.	SMMA_LO_01541
		Solve an addition problem involving money (sums 3 to 9 cents).	SMMA_LO_01543
		Solve a subtraction problem involving coins (two-digit numbers, no regrouping).	SMMA_LO_01579
		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
		Find the change from one dollar (item costs 55 to 99 cents).	SMMA_LO_01598
		Find the change from one dollar for two to four items (each 10, 15, or 20 cents).	SMMA_LO_01609
		Find the total value of a group of quarters, dimes, nickels, and pennies (sums to \$1.65).	SMMA_LO_01611
		Solve an addition problem in context (two-digit addends, sums less than 100, no regrouping).	SMMA_LO_01656
		CC.2.4.2.A.4	Students acquire the knowledge and skills needed to: Represent and interpret data using line plots, picture graphs, and bar graphs.
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 (four to six items).	SMMA_LO_00138		
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 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		
Create a table from a vertical bar graph.	SMMA_LO_01132		
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		
Identify the table that represents the data in a vertical bar graph.	SMMA_LO_01136		
Label the categories of a vertical bar graph based on data from a table.	SMMA_LO_01138		
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		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.4.2.A.4	Students acquire the knowledge and skills needed to: Represent and interpret data using line plots, picture graphs, and bar graphs.	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
		Analyze a line plot to find the total number of items that fall at, above, or below a given value.	SMMA_LO_01156
		Complete and interpret a pictograph.	SMMA_LO_01207
		Read and interpret a pictograph about birds counted (2 to 5 birds in each row).	SMMA_LO_01299
		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
		Read a bar graph and answer questions about tree growth over time.	SMMA_LO_01304
		Choose a title for a line plot and label the units.	SMMA_LO_01643
		Create a table based on data from a bar graph.	SMMA_LO_01645
		Create a bar graph using data from a chart of values.	SMMA_LO_01696
		CC.2.4.2.A.6	Students acquire the knowledge and skills needed to: Extend the concepts of addition and subtraction to problems involving length.
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		
Measure two objects in inches; determine how much longer one object is than the other.	SMMA_LO_02015		
CC.2.1.3.B.1	Students acquire the knowledge and skills needed to: Apply place-value understanding and properties of operations to perform multi-digit arithmetic.	Multiply whole numbers (student choice, products 20×2 to 90×9 , multiples of 10).	SMMA_LO_00878
		Multiply whole numbers (products 2×20 to 90×9 , multiples of 10).	SMMA_LO_00885
		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
		Estimate the sum or difference in a money problem by rounding to the nearest 10 (two-digit sums and differences).	SMMA_LO_01580
		Estimate the sum by rounding to the nearest 10 (two-digit addends).	SMMA_LO_01615
		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

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.3.B.1	Students acquire the knowledge and skills needed to: Apply place-value understanding and properties of operations to perform multi-digit arithmetic.	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
		Estimate the sum by rounding to the nearest hundred (three-digit addends).	SMMA_LO_01675
		Estimate the difference (three-digit, differences 100 to 800).	SMMA_LO_01676
CC.2.1.3.C.1	Students acquire the knowledge and skills needed to: Explore and develop an understanding of fractions as numbers.	Count the fractional parts and total number of parts in a region (halves, thirds, fourths).	SMMA_LO_00403
		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
		Match the word name of a fraction to a fraction (halves, thirds, fourths).	SMMA_LO_00411
		Count the fractional parts and total number of parts in a set (halves, thirds, fourths).	SMMA_LO_00412
		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
		Match the word name of the fraction to the fraction (halves to eighths).	SMMA_LO_00416
		Count shaded parts and the total number of parts (halves to eighths).	SMMA_LO_00419
		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
		Count the shaded and total number of elements in a set (halves to eighths).	SMMA_LO_00423
		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
		Find a fraction equal to 1 (halves to eighths).	SMMA_LO_00427
		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
		Using a number line, compare fractions (like denominators, halves to sixteenths).	SMMA_LO_00434

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CC.2.1.3.C.1	Students acquire the knowledge and skills needed to: Explore and develop an understanding of fractions as numbers.	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
		Determine if a fraction can be simplified; simplify if possible (simplified fractions 1/2 to 3/4).	SMMA_LO_00452
		Identify two equivalent fractions for 1/2.	SMMA_LO_01708
		Model a fraction a/b by filling in a out of b sections in a fraction model.	SMMA_LO_02034
		Model equivalent fractions; identify equivalent fractions on a number line.	SMMA_LO_02035
		Represent a unit fraction 1/b by partitioning a number line and then finding 1/b on it.	SMMA_LO_02148
CC.2.2.3.A.1	Students acquire the knowledge and skills needed to: Represent and solve problems involving multiplication and division.	Divide using graphic models (combinations to 5 x 5).	SMMA_LO_00279
		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
		Compare products (products 2 x 2 to 9 x 9).	SMMA_LO_00350
		Solve for a or b in $a \times b = c$ (products 1 x 2 to 5 x 9).	SMMA_LO_00351
		Solve for a or b in $a \div b = c$ (combinations 1 x 2 to 5 x 5).	SMMA_LO_00352
		Solve for a or b in $a \div b = c$ (combinations 6 x 6 to 9 x 9).	SMMA_LO_00354
		Compare quotients (combinations 2 x 2 to 9 x 9).	SMMA_LO_00355
		Find the missing factor (products to 5 x 5).	SMMA_LO_00856
		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
		Find the missing factor (products 1 x 6 to 5 x 9).	SMMA_LO_00862
		Find the missing factor (products 1 x 6 to 9 x 5).	SMMA_LO_00864
		Find the missing factor (products 6 x 1 to 9 x 5).	SMMA_LO_00866
		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
		Find the missing factor (products 2 x 2 to 12 x 12).	SMMA_LO_00881
		Find the missing factor (products 20 x 11 to 90 x 99, multiples of 10).	SMMA_LO_00891
		Make a picture to solve a multiplication problem (basic facts).	SMMA_LO_01237
Make a picture to solve a division problem (math facts).	SMMA_LO_01238		

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CC.2.2.3.A.1	Students acquire the knowledge and skills needed to: Represent and solve problems involving multiplication and division.	Identify a picture that represents a division problem (math facts).	SMMA_LO_01245
		Identify a picture that represents a multiplication problem (basic facts).	SMMA_LO_01246
		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 the number sentence that represents a division problem in context (model shown, dividends to 20).	SMMA_LO_01569
		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 2×2 to 5×5).	SMMA_LO_01578
		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 3×4 to 9×9).	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
		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
CC.2.2.3.A.2	Students acquire the knowledge and skills needed to: Understand properties of multiplication and the relationship between multiplication and division.	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
		Represent a division problem as an unknown-factor problem; then find the missing factor.	SMMA_LO_02039

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CC.2.2.3.A.3	Students acquire the knowledge and skills needed to: Demonstrate multiplication and division fluency.	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
		Solve for c in $a \times b = c$ (products 1 x 2 to 5 x 9).	SMMA_LO_00346
		Find the quotient (dividends 6 x 6 to 9 x 9).	SMMA_LO_00349
		Solve for c in $a \times b = c$ (products 6 x 2 to 9 x 12).	SMMA_LO_00353
		Multiply whole numbers (products to 5 x 5).	SMMA_LO_00855
		Multiply whole numbers (products 6 x 1 to 9 x 5).	SMMA_LO_00857
		Multiply whole numbers (products 1 x 2 to 5 x 5).	SMMA_LO_00861
		Multiply whole numbers (products 1 x 6 to 5 x 9).	SMMA_LO_00863
		Multiply whole numbers (products 6 x 2 to 9 x 5).	SMMA_LO_00865
		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
CC.2.2.3.A.4	Students acquire the knowledge and skills needed to: Solve problems involving the four operations, and identify and explain patterns in arithmetic.	Solve for a, b, or c in $a + b + c = d$ (sums 10 to 19).	SMMA_LO_00335
		Solve for d in $a + b + c = d$ (one-digit addends, sums 20 to 27).	SMMA_LO_00339
		Find the missing two-digit number in a sequence of odd or even numbers.	SMMA_LO_01002
		Identify the missing operation in a subtraction or addition number sentence (basic facts).	SMMA_LO_01031
		Identify the missing operation (sums 20 to 99, differences 10 to 70).	SMMA_LO_01055
		Identify the missing operation in a number sentence (all operations).	SMMA_LO_01074
		Identify if a sum or difference of two numbers is odd or even (one- or two-digit numbers).	SMMA_LO_01079
		Identify if the sum, difference, or product of two numbers is even or odd.	SMMA_LO_01086
		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
		Determine the reasonableness of a sum or difference (two- and three-digit numbers).	SMMA_LO_01259
		Identify a number sentence that could be used to solve a multiplication problem.	SMMA_LO_01270
		Identify extra information in a problem.	SMMA_LO_01272
		Identify the missing information needed to solve a two-step problem; then solve the problem.	SMMA_LO_01274

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CC.2.2.3.A.4	Students acquire the knowledge and skills needed to: Solve problems involving the four operations, and identify and explain patterns in arithmetic.	Identify an expression that can be used to solve a problem (inverse operations).	SMMA_LO_01275
		Work backward to solve a two-step problem.	SMMA_LO_01288
		Find the missing information needed to solve a problem; then solve.	SMMA_LO_01293
		Estimate the distance by rounding ($d = rt$).	SMMA_LO_01606
		Solve a two-step multiplication and addition problem in context.	SMMA_LO_01633
CC.2.3.3.A.1	Students acquire the knowledge and skills needed to: Identify, compare, and classify shapes and their attributes.	Identify the quadrilaterals in a set of figures.	SMMA_LO_00615
		Identify parallelograms, rhombuses, and trapezoids.	SMMA_LO_00620
		Identify the quadrilaterals that are trapezoids or rhombuses.	SMMA_LO_00659
CC.2.3.3.A.2	Students acquire the knowledge and skills needed to: Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.	Identify the model that is divided into equal parts (2 to 8 parts).	SMMA_LO_00400
		Count the number of equal parts in a fractional model (2 to 8 parts).	SMMA_LO_00402
		Identify the figure divided into equal parts (halves to eighths).	SMMA_LO_00417
CC.2.4.3.A.1	Students acquire the knowledge and skills needed to: Solve problems involving measurement and estimation of temperature, liquid volume, mass, and length.	Select the appropriate standard unit of measurement for length, capacity, and weight (customary).	SMMA_LO_00729
		Add nonstandard units of capacity (sums 2 to 8).	SMMA_LO_00739
		Subtract nonstandard units of capacity (differences 0 to 3).	SMMA_LO_00742
		Find the capacity of a container (3 to 10 nonstandard units).	SMMA_LO_00754
		Identify the tool for a particular use (thermometer, scale, clock).	SMMA_LO_00761
		Add units of capacity (pints, sums 2 to 6).	SMMA_LO_00764
		Select the appropriate standard unit of measurement for length, capacity, and weight (metric).	SMMA_LO_00767
		Read a thermometer to the nearest 10 degrees (Fahrenheit).	SMMA_LO_00768
		Identify the reasonable weight of an object (ounces, pounds, and tons).	SMMA_LO_00787
		Given the length of one side of a rectangle, measure another side, and then find the perimeter.	SMMA_LO_00788
		Measure the length of a bar to the nearest $\frac{1}{4}$ inch or 0.5 cm.	SMMA_LO_00822
		Read weights from a chart; choose two weights that equal a given total (sums to 1,500).	SMMA_LO_01301
		Choose the appropriate customary units of liquid measure (cups, quarts, and gallons).	SMMA_LO_01674
CC.2.4.3.A.2	Students acquire the knowledge and skills needed to: Tell and write time to the nearest minute and solve problems by calculating time intervals.	Show time to the minute using digital and analog clocks.	SMMA_LO_00771
		Find the time 5 to 50 minutes after the time shown (analog clock).	SMMA_LO_00798
		Set the digital clock to match the time on the analog clock to the exact minute.	SMMA_LO_01670

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CC.2.4.3.A.3	Students acquire the knowledge and skills needed to: Solve problems and make change involving money using a combination of coins and bills.	Determine the number of cents in 1 to 100 pennies, 1 to 20 nickels, or 1 to 10 dimes.	SMMA_LO_00143
		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
		Solve an addition problem by finding the total cost of two items (prices expressed as decimals, total < \$0.50, no regrouping).	SMMA_LO_00181
		Write the value of a set of dimes in dollar form (\$1.10 to \$3.90).	SMMA_LO_00183
		Identify nickels or dimes.	SMMA_LO_00698
		Enter the amount of money shown (1 to 5 cents in pennies).	SMMA_LO_00699
		Identify the coin worth 1, 5, 10, or 25 cents.	SMMA_LO_00702
		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
		Identify the coin equivalent to 5, 10, or 25 pennies.	SMMA_LO_00727
		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
		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
		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
		Identify the fraction of a dollar a coin is worth (penny to half-dollar).	SMMA_LO_00809
		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
		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		

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CC.2.4.3.A.3	Students acquire the knowledge and skills needed to: Solve problems and make change involving money using a combination of coins and bills.	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
		Solve a division problem about money with extra information (round quotient to the nearest whole number).	SMMA_LO_01585
		Estimate the total cost of four items by rounding to the nearest dollar (sums to \$15.00).	SMMA_LO_01591
		Find the change from one dollar (item costs 55 to 99 cents).	SMMA_LO_01598
		Find the change from one dollar for two to four items (each 10, 15, or 20 cents).	SMMA_LO_01609
		Find the total value of a group of quarters, dimes, nickels, and pennies (sums to \$1.65).	SMMA_LO_01611
		Determine the number of dollar bills needed to buy three to five items.	SMMA_LO_01623
		Estimate the difference by rounding to the nearest dollar (minuends \$5.00 to \$20.00, subtrahends \$3.00 to \$15.00).	SMMA_LO_01669
		CC.2.4.3.A.4	Students acquire the knowledge and skills needed to: Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.
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		
Create a bar graph.	SMMA_LO_01769		
CC.2.4.3.A.5	Students acquire the knowledge and skills needed to: Determine the area of a rectangle and apply the concept to multiplication and to addition.	Find the area of a rectangle (36 to 144 customary or metric square units).	SMMA_LO_00173
		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
		Using a grid, find the area of a simple figure (8 to 60 nonstandard units).	SMMA_LO_00786
		Identify a figure with a given area on a geoboard (4 to 15 square units).	SMMA_LO_00802
		Estimate the area of a figure on a grid (3 to 11 square units).	SMMA_LO_00808
		Find the area of a rectangle using a formula.	SMMA_LO_00810
Identify rectangles that have equal areas, but different dimensions.	SMMA_LO_00823		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.4.3.A.5	Students acquire the knowledge and skills needed to: Determine the area of a rectangle and apply the concept to multiplication and to addition.	Find the area of an irregular figure displayed on a grid (12 to 50 square units).	SMMA_LO_01280
		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
		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
		Tile a rectangle to find its area; represent the area of the rectangle in two different ways (length times width and the sum of the areas of two smaller rectangles).	SMMA_LO_02031
		Find the area of a rectilinear figure in a context by decomposing it into two rectangles.	SMMA_LO_02032
		Apply the Distributive Property as a strategy to multiply whole numbers.	SMMA_LO_02038
		R: Identify a unit square and what attribute it is used to measure.	SMMA_LO_02027
CC.2.4.3.A.6	Students acquire the knowledge and skills needed to: Solve problems involving perimeters of polygons and distinguish between linear and area measures.	Find the perimeter of a rectangle (24 to 48 customary or metric units).	SMMA_LO_00169
		Count to find the perimeter (3 to 9 nonstandard units).	SMMA_LO_00708
		Identify the shape with the greater perimeter (3 to 11 nonstandard units).	SMMA_LO_00734
		Find the perimeter of a figure (3 to 10 nonstandard units).	SMMA_LO_00757
		Given the length of one side of a rectangle, measure another side, and then find the perimeter.	SMMA_LO_00788
		Identify the expression for the perimeter of a figure.	SMMA_LO_00818
		Given the lengths of all sides, find the perimeter of a rectangle.	SMMA_LO_00821
		Given a perimeter, mark equilateral polygons with the same side measures.	SMMA_LO_00849
		Identify examples of relationships between area and perimeter.	SMMA_LO_00850
		CC.2.1.4.B.1	Students acquire the knowledge and skills needed to: Apply place-value concepts to show an understanding of multi-digit whole numbers.
Identify the multiple of 5 that is closer to a number (25 to 94).	SMMA_LO_01006		
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		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.4.B.1	Students acquire the knowledge and skills needed to: Apply place-value concepts to show an understanding of multi-digit whole numbers.	Identify the expanded notation of a four-digit number.	SMMA_LO_01038
		Compare numbers (1,000 to 9,999).	SMMA_LO_01039
		Order four numbers from least to greatest (1,000 to 9,999).	SMMA_LO_01040
		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
		Find a number equal to 1 to 9 thousands, 0 to 9 hundreds, 0 to 9 tens, and 0 to 9 ones.	SMMA_LO_01051
		Identify 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 the number for a word name (1000 to 9999).	SMMA_LO_01065
		Enter a number in a place-value chart (10,000 to 999,999).	SMMA_LO_01070
		Identify a number that is one or two greater than or less than a five- or six-digit number.	SMMA_LO_01072
		Enter each individual digit in a place-value chart for a five- to nine-digit number given the name of the number.	SMMA_LO_01075
		Identify the number when given the word name (10,000 to 999,999).	SMMA_LO_01076
		Round a three- to five-digit number to the nearest hundred.	SMMA_LO_01081
		Identify the digits in the period (hundreds, thousands, millions, and billions).	SMMA_LO_01083
		Express a number in expanded notation or determine the number from an expanded notation.	SMMA_LO_01097
		Round four- to five-digit numbers in context (to the nearest thousand).	SMMA_LO_01106
		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
CC.2.1.4.B.2	Students acquire the knowledge and skills needed to: Use place-value understanding and properties of operations to perform multi-digit arithmetic.	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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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.4.B.2	Students acquire the knowledge and skills needed to: Use place-value understanding and properties of operations to perform multi-digit arithmetic.	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
		Divide using the long division algorithm (one-digit divisor, no remainder).	SMMA_LO_00290
		Divide using the long division algorithm (one-digit divisor, remainder).	SMMA_LO_00292
		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
		Multiply multiples of 10 using mental math (20 x 20 to 90 x 90).	SMMA_LO_00299
		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
		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 (products 10 x 2 to 12 x 12).	SMMA_LO_00871
		Multiply whole numbers (student choice, products 16 x 2 to 19 x 5).	SMMA_LO_00872
		Multiply whole numbers (student choice, products 10 x 6 to 15 x 9).	SMMA_LO_00874
		Multiply whole numbers (products 2 x 12 to 12 x 12).	SMMA_LO_00875
		Multiply whole numbers (student choice, products 16 x 6 to 19 x 9).	SMMA_LO_00876
		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 (student choice, products 101 x 2 to 999 x 9).	SMMA_LO_00886

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CC.2.1.4.B.2	Students acquire the knowledge and skills needed to: Use place-value understanding and properties of operations to perform multi-digit arithmetic.	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
		Find the missing factor (products 20 x 20 to 90 x 90, multiples of 10).	SMMA_LO_00893
		Multiply whole numbers (products 13 x 1 to 19 x 5).	SMMA_LO_00894
		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
		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

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CC.2.1.4.B.2	Students acquire the knowledge and skills needed to: Use place-value understanding and properties of operations to perform multi-digit arithmetic.	Estimate the product by rounding the second factor.	SMMA_LO_01603
		Estimate the sum by rounding to the nearest hundred (three-digit addends).	SMMA_LO_01621
		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
CC.2.1.4.C.1	Students acquire the knowledge and skills needed to: Extend the understanding of fractions to show equivalence and ordering.	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, find equivalent fractions (halves to sixteenths).	SMMA_LO_00433
		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 to 1 (halves to sixteenths).	SMMA_LO_00448
		Find the missing numerator or denominator in an equivalent fraction (simplified fractions $\frac{1}{2}$ to $\frac{3}{4}$).	SMMA_LO_00451
		Find the missing numerator or denominator in an equivalent fraction (simplified fractions $\frac{1}{2}$ to $\frac{7}{8}$).	SMMA_LO_00453
		Determine if a fraction can be simplified; simplify if possible (simplified fractions $\frac{1}{2}$ to $\frac{7}{8}$).	SMMA_LO_00454
		Write a fraction in simplest form (simplified fractions $\frac{1}{2}$ to $\frac{7}{8}$).	SMMA_LO_00455
		Determine if a fraction can be simplified; simplify if possible (simplified fractions $\frac{1}{2}$ to $\frac{7}{8}$).	SMMA_LO_00456
		Find an equivalent fraction of a simplified fraction (simplified fractions $\frac{1}{2}$ to $\frac{8}{9}$).	SMMA_LO_00457
		Find three equivalent fractions (simplified fractions $\frac{1}{2}$ to $\frac{8}{9}$).	SMMA_LO_00458
		Compare fractions (unlike denominators).	SMMA_LO_00462
		Identify the greatest or least fraction in a problem (unlike denominators).	SMMA_LO_00482
		Identify the figures with the equivalent fractional parts shaded.	SMMA_LO_00483
		Compare fractions (unlike denominators).	SMMA_LO_00495
		Identify a list of fractions that is ordered from least to greatest.	SMMA_LO_00497
		Identify the fraction that is between two fractions.	SMMA_LO_00503
		Estimate the difference of two fractions.	SMMA_LO_01707

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CC.2.1.4.C.1	Students acquire the knowledge and skills needed to: Extend the understanding of fractions to show equivalence and ordering.	Generate a table of equivalent fractions for a fraction in simplest form.	SMMA_LO_01791
		Generate a table of equivalent fractions for a fraction not in simplest form.	SMMA_LO_01792
		Identify the fraction equivalent to the given fraction.	SMMA_LO_01793
		R: Determine the least common denominator of two fractions.	SMMA_LO_00493
CC.2.1.4.C.2	Students acquire the knowledge and skills needed to: Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	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
		Rewrite a fraction as a mixed number (halves to eighths).	SMMA_LO_00449
		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 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 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 a model and an equation to solve word problems involving the subtraction of fractions with like denominators.	SMMA_LO_02016
		Determine addition expressions that are equivalent to a given fraction.	SMMA_LO_02146
		CC.2.1.4.C.3	Students acquire the knowledge and skills needed to: Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, e.g., 19/100).
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		
Compare decimal numbers (0.1 to 9.9).	SMMA_LO_00191		
Enter the decimal equivalent for a mixed number (hundredths, 0.10 to 9.99).	SMMA_LO_00205		
Compare two decimal numbers (10.01 to 99.99).	SMMA_LO_00216		
Order three decimal numbers (tenths to hundredths).	SMMA_LO_00218		
Determine the equivalent fraction for a decimal (the denominator is a factor of 100).	SMMA_LO_00259		

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CC.2.1.4.C.3	Students acquire the knowledge and skills needed to: Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, e.g., 19/100).	Express a fraction with denominator 10 as an equivalent fraction with denominator 100. Then, add that fraction to another fraction with denominator 100.	SMMA_LO_02007
CC.2.2.4.A.1	Students acquire the knowledge and skills needed to: Represent and solve problems involving the four operations.	Identify a reasonable answer for a division problem.	SMMA_LO_00246
		Use a picture to solve an addition problem with three addends.	SMMA_LO_01286
		Choose a method to solve a two-step problem.	SMMA_LO_01289
		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
		Measure topsoil in a soil sample; calculate how long it took to form.	SMMA_LO_01323
		Determine the number of calories in multiple servings given data in a chart.	SMMA_LO_01333
		Identify the expression that gives the best estimate for an addition or subtraction problem in context (two-digit numbers).	SMMA_LO_01566
		Solve a division problem in context by rounding the quotient to the next whole number (model shown).	SMMA_LO_01573
		Make a picture to solve a multistep addition and multiplication problem in context.	SMMA_LO_01592
		Solve an addition problem using data in a table (sums 100 to 198).	SMMA_LO_01595
		Solve a multiplication problem in context (one-, two-, and three-digit factors).	SMMA_LO_01604
		Solve a problem in context that involves finding the difference of 2 three-digit numbers.	SMMA_LO_01610
		Estimate the difference of 2 four-digit numbers to the nearest thousand.	SMMA_LO_01614
		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
		Identify the best estimate for a sum using data in a table (three- and four-digit addends).	SMMA_LO_01620
		Share a set of objects equally to show a division problem (6, 7, 10, or 12 objects).	SMMA_LO_01663
		Translate a verbal statement of a multiplicative comparison into a multiplication equation.	SMMA_LO_02008
		Use a model to represent a word problem involving multiplicative comparison. Then, use an equation to represent the solution to the word problem.	SMMA_LO_02009

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CC.2.2.4.A.1	Students acquire the knowledge and skills needed to: Represent and solve problems involving the four operations.	Interpret a multiplication equation by writing a comparison statement.	SMMA_LO_02025
		R: Identify the most reasonable quantity for a context (order of magnitude differs).	SMMA_LO_01586
CC.2.2.4.A.2	Students acquire the knowledge and skills needed to: Develop and/or apply number theory concepts to find factors and multiples.	Identify the number that is divisible by a given factor (numbers 2 to 81, factors 2 to 9).	SMMA_LO_01066
		Identify numbers that are multiples of a given number.	SMMA_LO_01069
		Identify the complete set of factors for a number (2 to 25).	SMMA_LO_01071
		Find the factors of a number and determine if the number is prime or composite (3 to 30).	SMMA_LO_01073
		Identify the prime factorization of a two-digit number.	SMMA_LO_01093
		Identify which numbers are divisible by another number (divisors 2 to 10).	SMMA_LO_01101
		Identify prime and composite numbers (one- or two-digit).	SMMA_LO_01105
		Determine three factors of a given number.	SMMA_LO_01107
		Identify sets of prime and composite numbers.	SMMA_LO_01119
		CC.2.2.4.A.4	Students acquire the knowledge and skills needed to: Generate and analyze patterns using one rule.
Extend a 1-2-1-2 pattern of pictures.	SMMA_LO_00519		
Extend a 1-2-1-2 pattern of geometric figures.	SMMA_LO_00520		
Extend a 1-1-2-2 pattern of pictures.	SMMA_LO_00521		
Extend a 1-1-2-2 pattern of geometric figures.	SMMA_LO_00522		
Match patterns of geometric figures.	SMMA_LO_00539		
Extend a 1-2-2 pattern of pictures.	SMMA_LO_00556		
Extend a 1-1-2 or 1-2-2 pattern of congruent shapes.	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		
Identify the missing picture in a 1-2-3-1-2-3 pattern.	SMMA_LO_00607		
Count by 2's, 3's, or 10's (11 to 209, not multiples of 2, 3, 10).	SMMA_LO_01056		
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		
Find a missing number in an arithmetic sequence (-200 to 200, intervals 3 to 8).	SMMA_LO_01115		
Look for a pattern to solve a problem.	SMMA_LO_01276		
Describe the relationship between two sets of numbers in a relation or function using multiplication, addition, or subtraction.	SMMA_LO_01653		
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		

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CC.2.2.4.A.4	Students acquire the knowledge and skills needed to: Generate and analyze patterns using one rule.	Describe the relationship between two sets of numbers in a relation or function using multiplication (factors 2 - 5).	SMMA_LO_01655
		Extend a geometric pattern.	SMMA_LO_01691
		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
CC.2.3.4.A.1	Students acquire the knowledge and skills needed to: Draw lines and angles and identify these in two-dimensional figures.	Identify line segments in three- and four-sided figures.	SMMA_LO_00579
		Predict whether or not lines will intersect.	SMMA_LO_00598
		Identify line segments.	SMMA_LO_00605
		Match the labeled angles to the correct angle notation.	SMMA_LO_00617
		Identify parallel and perpendicular streets on a map.	SMMA_LO_00619
		Determine whether an angle is larger than, smaller than, or the same size as a right angle.	SMMA_LO_00624
		Identify the set of vertices on a grid can be connected to form a figure (triangle, quadrilateral, rectangle, or square).	SMMA_LO_00625
		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
		Draw a line segment using a ruler (to 1/4 inch and 0.5 cm).	SMMA_LO_00800
		CC.2.3.4.A.2	Students acquire the knowledge and skills needed to: Classify two-dimensional figures by properties of their lines and angles.
Identify acute, obtuse, and right triangles.	SMMA_LO_00655		
Classify and sort two-dimensional geometric figures by properties and attributes.	SMMA_LO_01728		
Identify all triangles of a particular class (acute, right, or obtuse).	SMMA_LO_01774		
CC.2.3.4.A.3	Students acquire the knowledge and skills needed to: Recognize symmetric shapes and draw lines of symmetry.	Identify the vertical line of symmetry.	SMMA_LO_00595
		Identify the horizontal line of symmetry.	SMMA_LO_00597
		Draw a vertical or horizontal line of symmetry.	SMMA_LO_00608
		Identify lines that are lines of symmetry.	SMMA_LO_00623
		Complete a symmetrical drawing.	SMMA_LO_00647
		Identify the lines of symmetry in an object.	SMMA_LO_01699
CC.2.4.4.A.1	Students acquire the knowledge and skills needed to: Solve problems involving measurement and conversions from a larger unit to a smaller unit.	Find the elapsed time (differences from 1 to 6 hours, does not cross 12 o'clock).	SMMA_LO_00142
		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

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.4.4.A.1	Students acquire the knowledge and skills needed to: Solve problems involving measurement and conversions from a larger unit to a smaller unit.	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
		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
		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
		Show time 1 to 11 hours and 5 to 55 minutes before or after the time shown (analog and digital clocks).	SMMA_LO_00775
		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
		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
		Solve a problem by identifying the time 1 to 2 hours after a given time (not crossing 12 o'clock).	SMMA_LO_01547
		Solve an addition problem in context (3 three-digit addends, regrouping).	SMMA_LO_01597
		Solve a decimal subtraction problem in context (tenths, regrouping).	SMMA_LO_01599
		Solve a problem in context that involves adding three amounts expressed as dollars and cents.	SMMA_LO_01608
Given the ending time and the elapsed time, find the starting time.	SMMA_LO_01613		
Convert hours to minutes.	SMMA_LO_01672		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.4.4.A.1	Students acquire the knowledge and skills needed to: Solve problems involving measurement and conversions from a larger unit to a smaller unit.	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
		Show time 1 to 11 hours and 5 to 55 minutes before or after the time shown (analog and digital clocks).	SMMA_LO_02155
CC.2.4.4.A.6	Students acquire the knowledge and skills needed to: Measure angles and use properties of adjacent angles to solve problems.	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
		Select the appropriate protractor to measure an angle.	SMMA_LO_00644
		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: Identify the better estimate for an angle measure.	SMMA_LO_00657
CC.2.1.5.B.1	Students acquire the knowledge and skills needed to: Apply place-value concepts to show an understanding of operations and rounding as they pertain to whole numbers and decimals.	Identify the decimal number with a 0 to 9 in the tenths or hundredths place.	SMMA_LO_00202
		Match the word name with the decimal number (0.10 to 9.99).	SMMA_LO_00204
		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
		Match a decimal number to an equivalent fraction (tenths to thousandths).	SMMA_LO_00224
		Compare decimal numbers (to thousandths).	SMMA_LO_00225
		Match a decimal number to its word name (to thousandths).	SMMA_LO_00227
		Round a decimal to the nearest tenth, hundredth, or whole number.	SMMA_LO_00230
		Identify the best estimate of a sum, difference, or product.	SMMA_LO_00231
		Order three decimals from least to greatest (to thousandths).	SMMA_LO_00236
		Identify the best estimate for a quotient (decimal divided by a whole number).	SMMA_LO_00238
		Identify the place value of a digit in a decimal number (tenths to ten thousandths).	SMMA_LO_00241
		Match a decimal number to a model (thousandths).	SMMA_LO_00242
		Identify the probable error in a multiplication calculation with decimals.	SMMA_LO_00250

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.5.B.1	Students acquire the knowledge and skills needed to: Apply place-value concepts to show an understanding of operations and rounding as they pertain to whole numbers and decimals.	Identify the symbol (< or >) needed to complete the inequality.	SMMA_LO_00254
		Find an equivalent mixed number for a decimal (tenths to ten thousandths).	SMMA_LO_00255
		Multiply whole numbers (multiples of 10 or 100).	SMMA_LO_00911
		Estimate the product of two numbers (factors 101 to 949).	SMMA_LO_00912
		Enter a decimal number in a place-value chart (tenths to thousandths).	SMMA_LO_01089
		Estimate the product of three factors (1,000 to 350,000).	SMMA_LO_01099
		Identify a list of decimal numbers ordered from least to greatest.	SMMA_LO_01103
		Estimate the sum, difference, product or quotient to solve a problem in context (round to the nearest thousand).	SMMA_LO_01109
		Estimate the product by rounding each factor.	SMMA_LO_01622
		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
		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
CC.2.1.5.B.2	Students acquire the knowledge and skills needed to: Extend an understanding of operations with whole numbers to perform operations including decimals.	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
		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 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
		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

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CC.2.1.5.B.2	Students acquire the knowledge and skills needed to: Extend an understanding of operations with whole numbers to perform operations including decimals.	Subtract money amounts (sums less than \$17.00, regrouping).	SMMA_LO_00208
		Add or subtract decimals using mental math (sums less than 1.00, with or without regrouping).	SMMA_LO_00210
		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
		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 0.2×2 to 0.9×5).	SMMA_LO_00219
		Find the missing decimal number on a number line; then count by multiples of tenths to find the product.	SMMA_LO_00220
		Multiply a decimal and a whole number displayed horizontally (0.02×2 to 0.09×5).	SMMA_LO_00221
		Identify the location of the decimal point of the product of two decimals (factors, tenths to hundredths).	SMMA_LO_00222
		Multiply two decimals or multiply a decimal by a whole number (tenths to hundredths).	SMMA_LO_00223
		Multiply decimals displayed horizontally (0.2×0.6 to 0.9×0.12).	SMMA_LO_00232
		Multiply decimals by 10, 100, or 1000.	SMMA_LO_00235
		Divide a decimal by a decimal (horizontal division; dividends to tenths).	SMMA_LO_00237
		Divide a decimal by a whole number.	SMMA_LO_00239
		Determine the missing factor in the multiplication number sentence (decimals, to ten-thousandths).	SMMA_LO_00240
		Divide decimals (0.3×0.3 to 0.9×0.09).	SMMA_LO_00245
		Divide decimals (0×2 to 2×5).	SMMA_LO_00251
		Multiply a whole number or a decimal by 0.1, 0.01, or 0.001.	SMMA_LO_00252
		Find the missing decimal number in a pattern.	SMMA_LO_00253
		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
		Divide (combinations 2×20 to 5×90).	SMMA_LO_00291
		Divide (combinations 6×20 to 9×90).	SMMA_LO_00293
		Find the perimeter of a polygon (decimal numbers, metric units).	SMMA_LO_00790
		Find the perimeter of a polygon (decimal numbers, metric units).	SMMA_LO_00805

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CC.2.1.5.B.2	Students acquire the knowledge and skills needed to: Extend an understanding of operations with whole numbers to perform operations including decimals.	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
		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
		Identify the rule for an iterative pattern.	SMMA_LO_01840
CC.2.1.5.C.1	Students acquire the knowledge and skills needed to: Use the understanding of equivalency to add and subtract fractions.	Using a model, rewrite a whole number as a fraction (halves to eighths).	SMMA_LO_00443
		Identify the difference when a fraction is subtracted from 1 (fourths to twelfths).	SMMA_LO_00445
		Using a model, rewrite a mixed number as a fraction (halves to eighths).	SMMA_LO_00446
		Rewrite a mixed number as a fraction (fifths to ninths).	SMMA_LO_00450
		Add mixed numbers; simplify if necessary (like denominators, halves to sixteenths).	SMMA_LO_00463
		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 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; simplify if necessary (like denominators).	SMMA_LO_00484
		Subtract mixed numbers; simplify if necessary (like denominators).	SMMA_LO_00485
		Determine the equivalent fractions using the least common denominator of two given fractions.	SMMA_LO_00494
		Add mixed numbers; simplify if necessary (unlike denominators).	SMMA_LO_00499
Subtract mixed numbers; simplify if necessary (unlike denominators).	SMMA_LO_00500		
Add mixed numbers; simplify if necessary (unlike denominators).	SMMA_LO_00504		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.5.C.1	Students acquire the knowledge and skills needed to: Use the understanding of equivalency to add and subtract fractions.	Subtract mixed numbers; simplify if necessary (unlike denominators).	SMMA_LO_00505
		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
		Estimate the sum, product, or quotient in problems with fractions.	SMMA_LO_01095
		Add mixed numbers with like denominators in context; simplify if necessary.	SMMA_LO_01624
		Subtract two fractions from a whole within a context.	SMMA_LO_01634
		Add two fractional parts of whole numbers in context.	SMMA_LO_01640
		Use addition to find an equivalent fraction for $\frac{1}{2}$.	SMMA_LO_01706
		CC.2.1.5.C.2	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
Multiply a whole number by a proper fraction; no simplifying.	SMMA_LO_00470		
Multiply fractions; simplify.	SMMA_LO_00475		
Multiply fractions; simplify first.	SMMA_LO_00476		
Multiply a fraction and a whole number; simplify.	SMMA_LO_00477		
Multiply a fraction and a whole number; simplify first.	SMMA_LO_00478		
Find a fractional part of a fraction.	SMMA_LO_00498		
Multiply mixed numbers; simplify if necessary.	SMMA_LO_00501		
Multiply three fractions; simplify if necessary.	SMMA_LO_00506		
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		
Divide a whole number by a fraction; simplify if necessary.	SMMA_LO_01787		
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 a division word problem that results in a rational quotient; then express the word problem with an equation.	SMMA_LO_02047		
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		
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		
Determine whether multiplying a number by a factor results in scaling the number up or down.	SMMA_LO_02050		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.5.C.2	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	Determine whether multiplying a number by a factor results in scaling the number up or down.	SMMA_LO_02051
		Model the division of a unit fraction by a nonzero whole number, and compute the quotient.	SMMA_LO_02052
		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
		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
		Use models to solve real-world problems involving division of unit fractions by nonzero whole numbers.	SMMA_LO_02156
CC.2.2.5.A.1	Students acquire the knowledge and skills needed to: Interpret and evaluate numerical expressions using order of operations.	Evaluate an expression using the order of operations.	SMMA_LO_01091
CC.2.3.5.A.1	Students acquire the knowledge and skills needed to: Graph points in the first quadrant on the coordinate plane and interpret these points when solving real world and mathematical problems.	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
		Find the coordinates for a point on a grid.	SMMA_LO_01077
		Identify a point on a coordinate grid given the ordered pair.	SMMA_LO_01092
		Find the amount of increase or decrease between two points in a line graph.	SMMA_LO_01178
		Read and interpret a line graph.	SMMA_LO_01206
		Interpret a line graph with time and temperature data, and add a point to line graph.	SMMA_LO_01324
		Given the survival needs for a bug, interpret a line graph with time and temperature data.	SMMA_LO_01325
		Create a line graph using data from a table.	SMMA_LO_01697
		Graph a point on a coordinate grid (Quadrant I).	SMMA_LO_01735
		Create a line graph.	SMMA_LO_01771
		Graph a set of ordered pairs from a table on a coordinate plane (Quadrant I).	SMMA_LO_01808
CC.2.3.5.A.2	Students acquire the knowledge and skills needed to: Classify two-dimensional figures into categories based on an understanding of their properties.	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
CC.2.4.5.A.1	Students acquire the knowledge and skills needed to: Solve problems using conversions within a given measurement system.	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

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CC.2.4.5.A.1	Students acquire the knowledge and skills needed to: Solve problems using conversions within a given measurement system.	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
CC.2.4.5.A.2	Students acquire the knowledge and skills needed to: Represent and interpret data using appropriate scale.	Make a pictograph from a set of data.	SMMA_LO_00146
		Read and interpret a line graph.	SMMA_LO_01764
CC.2.4.5.A.5	Students acquire the knowledge and skills needed to: Apply concepts of volume to solve problems and relate volume to multiplication and to addition.	Determine the volume of a box given the height, width, and length (60 to 480 customary or metric cubic units).	SMMA_LO_00174
		Compute the volume of right rectangular prisms using formulas.	SMMA_LO_02043
		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
		R: Find the volume of a rectangular solid by counting cubes.	SMMA_LO_00829
		R: Find the volume of a rectangular solid by counting cubes.	SMMA_LO_00833
		R: Identify a unit cube and what attribute it is used to measure.	SMMA_LO_02041
		R: Find the volume of a prism by packing the prism with unit cubes.	SMMA_LO_02042
CC.2.1.6.D.1	Students acquire the knowledge and skills needed to: Understand ratio concepts and use ratio reasoning to solve problems.	Find a percent of a money amount (\$0.80 to \$10.80).	SMMA_LO_00270
		Find a percent of a number (the percent is greater than or equal to 100).	SMMA_LO_00275
		Find the percent given the whole and the part.	SMMA_LO_00276
		Find the whole given the percent and the part.	SMMA_LO_00277
		Find the unit price of an item (products 2×6 to 25×32).	SMMA_LO_00830
		Solve time and distance problems (whole numbers).	SMMA_LO_00842
		Identify equivalent representations of numbers.	SMMA_LO_01114
		Solve a proportion problem in context.	SMMA_LO_01284
		Given the rate and time, find the distance.	SMMA_LO_01575
		Find the number of hours worked given the hourly rate and total earned.	SMMA_LO_01625
		Find the amount of an ingredient needed to make two, three, or four times a recipe.	SMMA_LO_01627
		Find the total money earned, given the number of hours worked and the hourly rate.	SMMA_LO_01630
		Solve a problem in context using proportions.	SMMA_LO_01635
		Identify the ratio.	SMMA_LO_01712
		Determine the percent (100 total items).	SMMA_LO_01713
Express a fraction as a percent (denominator is 100).	SMMA_LO_01714		
Write a ratio in three different forms.	SMMA_LO_01825		

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CC.2.1.6.D.1	Students acquire the knowledge and skills needed to: Understand ratio concepts and use ratio reasoning to solve problems.	Identify two unit rates for a given word problem.	SMMA_LO_02114
		Find missing values in a table that represents a proportional relationship, and plot the pairs of values on the coordinate plane.	SMMA_LO_02115
		Complete a comparison statement based on the ratios in two tables.	SMMA_LO_02116
		Convert measurement units either by making a table or by multiplying by a unit rate.	SMMA_LO_02117
CC.2.1.6.E.1	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	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
		Divide a mixed number by a whole number; simplify if necessary.	SMMA_LO_00502
		Divide fractions; simplify.	SMMA_LO_00512
		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
		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
CC.2.1.6.E.2	Students acquire the knowledge and skills needed to: Identify and choose appropriate processes to compute fluently with multi-digit numbers.	Align the decimal numbers for a vertical addition problem; then solve (to thousandths).	SMMA_LO_00226
		Align the decimal numbers for a vertical subtraction problem; then solve (to thousandths).	SMMA_LO_00228
		Align the decimal numbers in a vertical subtraction problem; then solve (decimals to thousandths).	SMMA_LO_00233
		Multiply decimals (to thousandths x hundredths).	SMMA_LO_00234
		Subtract decimals with regrouping (to ten-thousandths).	SMMA_LO_00243
		Multiply decimals (to ten-thousandths x ten-thousandths).	SMMA_LO_00244
		Move the decimal point in the divisor and dividend in a long division problem.	SMMA_LO_00247
		Divide a decimal by a whole number.	SMMA_LO_00248
		Move the decimal point in the divisor and dividend in a long division problem; then find the quotient.	SMMA_LO_00249
		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
		Choose the best estimate for a long division problem (three-digit dividends, two-digit divisors).	SMMA_LO_00315

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CC.2.1.6.E.2	Students acquire the knowledge and skills needed to: Identify and choose appropriate processes to compute fluently with multi-digit numbers.	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 21 x 11 to 99 x 99).	SMMA_LO_00903
		Multiply whole numbers (student choice, products 101 x 20 to 999 x 90, multiples of 10).	SMMA_LO_00904
		Multiply whole numbers (student choice, products 100 x 21 to 990 x 90, multiples of 10).	SMMA_LO_00905
		Multiply (student choice, products 1000 x 20 to 9999 x 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 x 20 to 99,999 x 90).	SMMA_LO_00908
		Multiply whole numbers (student choice, products 1000 x 21 to 9999 x 99).	SMMA_LO_00909
		Multiply whole numbers (student choice, 10,000 x 21 to 99,999 x 99).	SMMA_LO_00910
		Multiply one- to five-digit whole numbers by powers of ten (10 to 100,000).	SMMA_LO_01078
		Find a decimal number that is either greater than or less than two decimal numbers.	SMMA_LO_01118
		Extend an iterative pattern.	SMMA_LO_01754
		Add the decimal numbers provided on a data table.	SMMA_LO_01785
		Subtract the decimal numbers provided on a data table.	SMMA_LO_01786
		R: Estimate the quotient in a long division problem (three-digit dividend, two-digit divisor, remainder).	SMMA_LO_00301
CC.2.1.6.E.3	Students acquire the knowledge and skills needed to: Develop and/or apply number theory concepts to find common factors and multiples.	Using a factor tree, find the prime factors of a number (2 to 32).	SMMA_LO_01087
		Identify a common factor of two numbers (4 to 81).	SMMA_LO_01088
		Identify the common multiples for two to three numbers (2 to 20).	SMMA_LO_01096
		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
CC.2.1.6.E.4	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of numbers to the system of rational numbers.	Locate the missing integer on a number line (-3 to -12).	SMMA_LO_00101
		Evaluate $-(a + b)$, where $9 < a < 19$, $1 < b < 9$.	SMMA_LO_00127
		Compare hundredths to multiples of $\frac{1}{4}$.	SMMA_LO_00209
		Read the temperature on a thermometer to nearest degree (-10 to 10 degrees).	SMMA_LO_00804

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.1.6.E.4	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of numbers to the system of rational numbers.	Determine the least or greatest integer (-10 to 10).	SMMA_LO_01102
		Read and interpret data in a table to determine the time it would take for skin to freeze.	SMMA_LO_01314
		Read and interpret data in a table to determine the time it would take for skin to freeze.	SMMA_LO_01315
		Evaluate the expression $-(-a)$, where a has values 1 to 99.	SMMA_LO_01518
		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
		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
		Use positive and negative numbers together to represent quantities having opposite directions or values.	SMMA_LO_02066
		Compare rational numbers in real-world contexts.	SMMA_LO_02109
		Complete statements of order for rational numbers in real-world contexts.	SMMA_LO_02110
		Compare the absolute values of positive and negative quantities in a real-world situation.	SMMA_LO_02111
		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
		CC.2.2.6.B.1	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of arithmetic to algebraic expressions.
Use the commutative and associative properties of addition to find the missing number.	SMMA_LO_01090		
Give the value of a number (1 to 10) raised to a power (1 to 5).	SMMA_LO_01098		
Match expressions with repeated factors to numbers in exponential form to create equations.	SMMA_LO_01100		
Given the value for the variable, evaluate an addition expression (sums 4 to 12).	SMMA_LO_01683		
Evaluate an expression with variables using substitution and a value chart (addition, sums to 18).	SMMA_LO_01685		
Evaluate the expression $mx + c$ or $mx - c$.	SMMA_LO_01739		
Evaluate an expression within a context (multiplication).	SMMA_LO_01740		
Generate a table of values given a one-step rule.	SMMA_LO_01755		
Identify the expression that is a translation of the written phrase.	SMMA_LO_01759		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.2.6.B.1	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of arithmetic to algebraic expressions.	Identify the written phrase that is a translation of a expression or inequality.	SMMA_LO_01815
		Translate an expression into a written phrase (two-step).	SMMA_LO_01816
		Write expressions that record operations with numbers and variables.	SMMA_LO_02056
		Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient).	SMMA_LO_02057
		Apply the properties of operations to generate equivalent expressions.	SMMA_LO_02059
		Choose all expressions that are equivalent to a given expression.	SMMA_LO_02060
CC.2.2.6.B.2	Students acquire the knowledge and skills needed to: Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.	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 $a \times b = c$ (products 6×2 to 9×12).	SMMA_LO_00357
		Solve for a or b in $a \div b = c$ (combinations $2 \div 10$ to $5 \div 12$).	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 $a \div b = c$ (combinations $6 \div 10$ to $9 \div 12$).	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 $a \times b = x$ (products 2×10 to 12×12).	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 $a \div b = c$ (combinations $6 \div 20$ to $9 \div 90$, multiples of 10).	SMMA_LO_00365
		Solve for a or b in $a \times b = x$ (products 2×20 to 12×90 , 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 $a \times b = c$ (products from 0.2×0.6 to 0.9×0.9).	SMMA_LO_00369
		Solve for a or b in $a \div b = c$ (combinations 0.6×0.6 to 0.9×0.9).	SMMA_LO_00370
		Solve for a, b, or c in $a \times b/c = d/e$ (combinations to 12×12).	SMMA_LO_00371
		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 $a \times b = c$ (products from 0.02×0.13 to 0.09×0.19).	SMMA_LO_00376
		Solve for a or b in $a \div b = c$ (up to 4-digit decimals).	SMMA_LO_00378
		Solve for a in $a + b = c$ or $a - b = c$ in steps (whole number sums and differences 2 to 20).	SMMA_LO_00379

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CC.2.2.6.B.2	Students acquire the knowledge and skills needed to: Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.	Solve for x in $ax = c$ in steps (products 4×4 to 9×10).	SMMA_LO_00380
		Complete the steps to solve for a in $a \div b = c$ (combinations 4×4 to 9×10).	SMMA_LO_00381
		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 for a , b , or c in $a \times b/c = d/e$ (combinations to 12×12).	SMMA_LO_01798
		Identify the one-step equation that is a translation of the written phrase within a context.	SMMA_LO_01813
		Solve a one-step equation (fractions, multiplication and division).	SMMA_LO_01847
		Solve a one-step equations (fractions, addition and subtraction).	SMMA_LO_01868
		Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	SMMA_LO_02061
		Write an expression to represent a real-world problem, using variables to represent numbers.	SMMA_LO_02062
		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		
CC.2.2.6.B.3	Students acquire the knowledge and skills needed to: Represent and analyze quantitative relationships between dependent and independent variables.	Identify an expression to describe the pattern generated by a table.	SMMA_LO_01741
		Complete a table given a two-step rule (single-digit whole numbers).	SMMA_LO_01750
		Complete a table given a two-step rule (whole numbers).	SMMA_LO_01751

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.2.6.B.3	Students acquire the knowledge and skills needed to: Represent and analyze quantitative relationships between dependent and independent variables.	Generate a table of values given a two-step rule.	SMMA_LO_01756
		Complete an input/output table given a two-step rule; then plot the ordered pairs on coordinate grid.	SMMA_LO_01758
		Make a table and a graph when given a rule in the form $y = ax$ or $y = x + a$.	SMMA_LO_02139
CC.2.3.6.A.1	Students acquire the knowledge and skills needed to: Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.	Multiply mixed numbers to determine the area of a rectangle or triangle; simplify if necessary.	SMMA_LO_00508
		Identify the set of faces for a geometric solid.	SMMA_LO_00664
		Classify and sort three-dimensional solids based on attributes using formal geometric language.	SMMA_LO_02138
		R: Identify faces, edges, and vertices of solids.	SMMA_LO_00632
		R: Count the vertices, edges, or faces of a prism or pyramid.	SMMA_LO_00643
		R: Complete sentences about bases, faces, edges, and vertices of geometric solids.	SMMA_LO_00652
		R: Identify geometric solids (prisms, pyramids, cones, or spheres).	SMMA_LO_00667
		R: Identify the net for a geometric solid.	SMMA_LO_00675
		R: Identify the net that forms a three-dimensional solid.	SMMA_LO_01772
CC.2.4.6.B.1	Students acquire the knowledge and skills needed to: Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.	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 mode of a set of data.	SMMA_LO_01164
		Find the range of a set of data.	SMMA_LO_01166
		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 equal.	SMMA_LO_01169
		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 range of a set of data represented in a line graph.	SMMA_LO_01176
		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
		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
		Determine the range, mean, median, and mode (one-digit numbers).	SMMA_LO_01210
		Graph and interpret rainfall data in a chart.	SMMA_LO_01328

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.4.6.B.1	Students acquire the knowledge and skills needed to: Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.	Determine the mode of a data set.	SMMA_LO_01719
		Determine the median of a data set.	SMMA_LO_01726
		Determine the mean of a data set.	SMMA_LO_01727
		Determine the mode of a set of data.	SMMA_LO_01765
		Determine the range of a set of data.	SMMA_LO_01766
		Determine the median of a set of data.	SMMA_LO_01768
		R: Solve a problem in context by finding the average (mean) of three to seven numbers.	SMMA_LO_01619
CC.2.1.7.D.1	Students acquire the knowledge and skills needed to: Analyze proportional relationships and use them to model and solve real-world and mathematical problems.	Find the total cost, given an amount and the sales tax percentage.	SMMA_LO_00178
		Find the percent of increase.	SMMA_LO_00278
		Form a proportion that can be used to solve for the height of an object.	SMMA_LO_00660
		Identify a correct expression to solve a problem about sales tax.	SMMA_LO_00845
		Identify an equation that can be used to solve a two-step problem in context.	SMMA_LO_01297
		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
		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
		Identify the correct proportion for the context, and then solve.	SMMA_LO_01826
		Determine the fraction needed to complete the proportion.	SMMA_LO_01827
		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
		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
CC.2.1.7.E.1	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of operations with fractions to operations with rational numbers.	Find the missing one-digit addend in a number sentence (positive or negative integers, sums are 0).	SMMA_LO_00102
		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

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CC.2.1.7.E.1	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of operations with fractions to operations with rational numbers.	Determine if the sum is positive or negative (one- and two-digit addends).	SMMA_LO_00106
		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 an equivalent expression of commutativity for addition of integers.	SMMA_LO_00114
		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
		Identify an equivalent expression with integers (four one-digit addends).	SMMA_LO_00117
		Identify $-(a + b)$ as equivalent to $-a - b$, where a and b are 1 to 9.	SMMA_LO_00118
		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
		Compare two expressions using the additive inverse property.	SMMA_LO_00120
		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
		Identify an equivalent variable expression $-(a + b) = -a + (-b)$.	SMMA_LO_00124
		Evaluate $-(a + b)$, where $1 < a, b < 9$.	SMMA_LO_00128
		Identify $a \times (b - c)$ as equivalent to $(a \times b) - (a \times c)$.	SMMA_LO_00130
		Identify the division problem that can be used to rewrite a fraction as a decimal.	SMMA_LO_00257
		Divide to convert from a fraction to a decimal equivalent.	SMMA_LO_00258
		Find the missing dividend or divisor (combinations 2×13 to 5×19).	SMMA_LO_00309
		Finding the missing dividend or divisor (combinations 6×13 to 9×19).	SMMA_LO_00310
		Divide integers (combinations 6×10 to -9×12 , dividend or divisor is negative).	SMMA_LO_00316
		Divide integers (combinations 4×6 to 12×12).	SMMA_LO_00317
		Divide integers (combinations 6×13 to 9×19 , all signs).	SMMA_LO_00319
		Find the missing dividend or divisor in a number sentence (combinations 7×13 to 9×19 , all signs).	SMMA_LO_00320

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CC.2.1.7.E.1	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of operations with fractions to operations with rational numbers.	Estimate the missing factor in a number sentence (round to the nearest ten, products 2,010 to 81,090).	SMMA_LO_00913
		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
		Determine the sign of the products of two integers (one and two-digit integers).	SMMA_LO_00916
		Multiply a negative integer by a positive integer (products $-(20 \times 2)$ to $-(90 \times 9)$).	SMMA_LO_00917
		Find the missing positive or negative factor in a number sentence.	SMMA_LO_00918
		Determine the sign of the product of four factors.	SMMA_LO_00919
		Multiply three integers (one-digit factors with absolute values 2 to 10).	SMMA_LO_00920
		Find a missing number in a geometric sequence (first number 1 to 5, factors 2 to 5).	SMMA_LO_01117
		Locate an integer on the number line (differences -5 to 1).	SMMA_LO_01505
		Subtract integers (minuends 0 to 10, subtrahends 1 to 10, differences negative).	SMMA_LO_01506
		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 using a number line.	SMMA_LO_01511
		Find the missing subtrahend in a number sentence (minuends -9 to 0, differences -9 to 0).	SMMA_LO_01512
		Subtract integers (minuends -20 to -10, subtrahends 0 to 10).	SMMA_LO_01513
		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
		Subtract integers (minuends -20 to 20, subtrahends 0 to -20).	SMMA_LO_01516
		Identify $a - (-b)$ as equivalent to $a + b$ (minuends 1 to 10).	SMMA_LO_01517
		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
		Identify $-a - (-b)$ as equivalent to $-a + b$ (minuends and subtrahends -9 to 9).	SMMA_LO_01521
		Subtract integers (minuends -10 to 0, subtrahends -10 to -1).	SMMA_LO_01522

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CC.2.1.7.E.1	Students acquire the knowledge and skills needed to: Apply and extend previous understandings of operations with fractions to operations with rational numbers.	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
		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
		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
		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
		Identify $a \times (b - c)$ as equivalent to $(a \times b) - (a \times c)$ with variables.	SMMA_LO_01533
		Identify $a \times (b - c)$ as equivalent to $(a \times b) - (a \times c)$.	SMMA_LO_01534
		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
		Find three consecutive integers when given their sum.	SMMA_LO_01639
		Extend an arithmetic sequence for three more terms.	SMMA_LO_01803
		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
		Represent addition and subtraction of rational numbers on a number line.	SMMA_LO_02085
		Describe situations that can be represented by opposite quantities.	SMMA_LO_02086
		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
		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

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CC.2.2.7.B.1	Students acquire the knowledge and skills needed to: Apply properties of operations to generate equivalent expressions.	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
CC.2.2.7.B.3	Students acquire the knowledge and skills needed to: Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.	Solve for a, b, c, or d in $a/b \times c/d = e/f$ (combinations to 12×12).	SMMA_LO_00372
		Solve for a, b, or c in $a/b \div c = d/e$ (combinations to 12×12).	SMMA_LO_00375
		Solve for a, b, c, or d in $a/b \div c/d = e/f$.	SMMA_LO_00377
		Complete the steps to solve for x in $ax \div b = c$ in steps.	SMMA_LO_00382
		Complete the steps to solve for x in $ax + b = c$.	SMMA_LO_00383
		Solve for x in $ax + b = c$.	SMMA_LO_00384
		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
		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 $-(4 \times 4)$ to (9×9)).	SMMA_LO_00390
		Solve for a in $a/b = c$ (products from $-(4 \times 4)$ to $-(9 \times 9)$).	SMMA_LO_00391
		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 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 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
		Identify the two-step equation that is a translation of the written phrase within a context.	SMMA_LO_01814
		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 two-step equation (integers).	SMMA_LO_01846
		Solve a one-step equation (fractions, addition and subtraction).	SMMA_LO_01848
		Solve a one-step equation (decimals, multiplication and division).	SMMA_LO_01849

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.2.7.B.3	Students acquire the knowledge and skills needed to: Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.	Solve a two-step equation (fractions, multiplication).	SMMA_LO_01850
		Solve a two-step equation (decimals).	SMMA_LO_01851
		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
		Identify the written phrase translated from an inequality.	SMMA_LO_01870
		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
		Determine the decimal and percent that is represented by a model (base-ten blocks, hundredths).	SMMA_LO_00256
		CC.2.3.7.A.1	Students acquire the knowledge and skills needed to: Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.
Establish that vertical angles are congruent.	SMMA_LO_00670		
Establish that alternate interior angles are congruent for parallel lines.	SMMA_LO_00672		
Find the measure of the missing angle in a diagram.	SMMA_LO_00674		
Solve a problem involving equal angle measures.	SMMA_LO_00677		
Use a formula to find the area of a parallelogram.	SMMA_LO_00824		
Determine if the perimeter, area, or volume is needed to solve the problem.	SMMA_LO_00826		
Find the area of a triangle using a formula.	SMMA_LO_00827		
Find the circumference, given the length of the diameter or the radius ($\pi = 3.14$).	SMMA_LO_00828		
Find the volume of a rectangular or triangular prism.	SMMA_LO_00838		
Choose the best estimate for the volume of a rectangular prism.	SMMA_LO_00848		
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		
Solve for a variable in the formula for volume of a rectangular prism (whole numbers and mixed numbers).	SMMA_LO_01817		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.3.7.A.1	Students acquire the knowledge and skills needed to: Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.	Calculate the volume of a rectangular prism; then convert the cubic feet or cubic meters into gallons or liters.	SMMA_LO_01819
		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
		Arrange statements to write a proof of a fact about either the angle sum or the exterior angle of a triangle.	SMMA_LO_02126
		Generalize a figure for surface area, and then use that formula to find the surface area of a given figure.	SMMA_LO_02144
		Identify parts of a circle (center, radius, and diameter).	SMMA_LO_00633
		Count the points of intersection of two or more lines (0 to 5 intersection points).	SMMA_LO_00635
		Identify a part of a circle (center, radius, chord, or diameter).	SMMA_LO_00653
CC.2.3.7.A.2	Students acquire the knowledge and skills needed to: Visualize and represent geometric figures and describe the relationships between them.	Identify the scale factor in similar shapes to find the missing corresponding sides.	SMMA_LO_00513
		Identify the cross section of a three-dimensional figure.	SMMA_LO_00668
		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
CC.2.4.7.B.1	Students acquire the knowledge and skills needed to: Draw inferences about populations based on random sampling concepts.	Find and compare the average variation of two sets of data.	SMMA_LO_01221
		Make predictions based on a sample.	SMMA_LO_01223
CC.2.4.7.B.3	Students acquire the knowledge and skills needed to: Investigate chance processes and develop, use, and evaluate probability models.	Determine whether a chronological event is certain or impossible.	SMMA_LO_01137
		Given information about a current situation, classify a future event as being certain, possible, or impossible.	SMMA_LO_01139
		Within the context of repeated selections without replacement from a bag containing two balls of the same color, label events as certain or impossible.	SMMA_LO_01141
		Given a sentence describing an observed event, label a future occurrence as certain, possible, or impossible.	SMMA_LO_01143
		Within the context of selecting without replacement from a cup containing three balls, each of a different color, label a given event prior to each selection as certain, possible, or impossible.	SMMA_LO_01147
		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

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.4.7.B.3	Students acquire the knowledge and skills needed to: Investigate chance processes and develop, use, and evaluate probability models.	Given a graphical representation of an urn containing balls of three colors, determine qualitatively which event is more probable to occur (5 to 8 times as many balls of one color as of the other color).	SMMA_LO_01157
		Given a graphical representation of 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
		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
		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
		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
		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
		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
		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, count the number of possible outcomes and complete a list of all the outcomes.	SMMA_LO_01209
		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

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.4.7.B.3	Students acquire the knowledge and skills needed to: Investigate chance processes and develop, use, and evaluate probability models.	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
		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, compute theoretical probability of an event defined by the sum of a pair of outcomes.	SMMA_LO_01220
		Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.	SMMA_LO_01224
		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
		Write a fraction to express the probability of an event.	SMMA_LO_01667
		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
		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 a graphical representation of two spinners, count all the possible outcomes for spinning each spinner once.	SMMA_LO_01665
		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
		CC.2.1.8.E.1	Students acquire the knowledge and skills needed to: Distinguish between rational and irrational numbers using their properties.
CC.2.1.8.E.4	Students acquire the knowledge and skills needed to: Estimate irrational numbers by comparing them to rational numbers.	Drag rational and irrational values to their correct positions on a number line.	SMMA_LO_02141

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CC.2.2.8.B.1	Students acquire the knowledge and skills needed to: Apply concepts of radicals and integer 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
		Express a number in scientific notation (exponents 1 to 6).	SMMA_LO_01113
		Find the square root of a number using a calculator (numbers to 4000).	SMMA_LO_01120
		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
		CC.2.2.8.B.2	Students acquire the knowledge and skills needed to: Understand the connections between proportional relationships, lines, and linear equations.
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		
Compare a proportional relationship represented as a graph to a proportional relationship represented as a table.	SMMA_LO_02074		
CC.2.2.8.B.3	Students acquire the knowledge and skills needed to: Analyze and solve linear equations and pairs of simultaneous linear equations.	Transform a given multi-step equation into a simpler form.	SMMA_LO_02079
		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
		Generate and solve an equation with variables on both sides of the equal sign in a real-world context.	SMMA_LO_02145
		CC.2.2.8.C.1	Students acquire the knowledge and skills needed to: Define, evaluate, and compare functions.
Identify the multiplication or division rule of the function.	SMMA_LO_01684		
Identify the one-step rule in the relation or function (addition and subtraction).	SMMA_LO_01722		

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PA Standard	PA Standard Text	Item Description	Item ID
CC.2.2.8.C.1	Students acquire the knowledge and skills needed to: Define, evaluate, and compare functions.	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
		Identify an expression to describe the pattern generated by a table.	SMMA_LO_01742
		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 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
		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
		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
		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
		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

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CC.2.2.8.C.2	Students acquire the knowledge and skills needed to: Use concepts of functions to model relationships between quantities.	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
		Identify whether graphs are linear or exponential.	SMMA_LO_01830
CC.2.3.8.A.1	Students acquire the knowledge and skills needed to: Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.	Use a formula to find the volume of a cylinder.	SMMA_LO_00839
		Use a formula to find the volume of a cone or a sphere.	SMMA_LO_00844
CC.2.3.8.A.2	Students acquire the knowledge and skills needed to: Understand and apply congruence, similarity, and geometric transformations using various tools.	Identify a figure as a slide, reflection (flip), or turn of another figure.	SMMA_LO_00599
		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
		Identify similar polygons.	SMMA_LO_00610
		Identify two figures as being similar, congruent, or neither.	SMMA_LO_00618
		Identify congruent angles.	SMMA_LO_00637
		Identify the polygon that is not similar to the others.	SMMA_LO_00645
		Identify a set of geometric figures that show a reflection (flip).	SMMA_LO_00648
		Identify the example that is a counterexample to a statement.	SMMA_LO_00649
		Identify a reflection, a rotation, and a translation of a geometric figure.	SMMA_LO_00665
		Identify similar triangles or rectangles on a geoboard.	SMMA_LO_00847
		Determine the missing coordinate of a vertex of a triangle in a transformation.	SMMA_LO_01736
		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
		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
		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		

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CC.2.3.8.A.2	Students acquire the knowledge and skills needed to: Understand and apply congruence, similarity, and geometric transformations using various tools.	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
		Reflect a figure, find the coordinates of the reflected figure, and describe the effect of the reflection on the coordinates.	SMMA_LO_02125
		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
		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
		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
CC.2.3.8.A.3	Students acquire the knowledge and skills needed to: Understand and apply the Pythagorean Theorem to solve problems.	Find the measurement of the hypotenuse using the Pythagorean theorem. (2D)	SMMA_LO_01854
		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
		Explain a proof of the Pythagorean Theorem.	SMMA_LO_02131
		Explain a proof of the converse of the Pythagorean Theorem.	SMMA_LO_02132
CC.2.4.8.B.1	Students acquire the knowledge and skills needed to: Analyze and/or interpret bivariate data displayed in multiple representations.	Identify positive, negative, or no association for sets of actual data.	SMMA_LO_01222
		Choose an approximation based on a trend line for bivariate data.	SMMA_LO_02143

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