



# SuccessMaker<sup>®</sup>

## California State Standards Alignments for Mathematics

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

| CA Standard   | CA Standard Text  | Item Description  | Item ID  |
|---|---|---|--|
| K.CC.A.1  | Count to 100 by ones and by tens.   | 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  |
| K.CC.A.2  | Count forward beginning from a given number within the known sequence (instead of having to begin at 1).  | Enter the missing date on a calendar.   | smma_lo_00700  |
|   |   | Find the next number in a sequence, counting by 1's (1 to 5).                                       | smma_lo_00940  |
|   |   | 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  |
|   |   | K.CC.A.3  | Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). |
| Match a digit to a set with that number of objects (0 to 5).      | smma_lo_00934   |   |  |
| Enter the number shown (1 to 9).                                  | smma_lo_00942   |   |  |
| 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   |   |  |
| R: Enter the number shown (0 to 4).                               | smma_lo_00001   |   |  |
| R: Enter the number shown (5 to 9).                               | smma_lo_00002   |   |  |
| R: Identify a number from a spoken number (1 to 5).               | smma_lo_00937   |   |  |
| R: Identify a number from a spoken number (6 to 9).               | smma_lo_00944   |   |  |
| K.CC.B.4.a  | When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.             | Find the next number in a sequence, counting by 1's (1 to 9).                                       | smma_lo_00948  |
|   |   | R: Match objects to show a one-to-one correspondence (2 to 5 objects).                              | smma_lo_00921  |
| K.CC.B.4.b  | Understand that the last number me said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. | Find the next number in a sequence, counting by 1's (1 to 5).                                       | smma_lo_00939  |
|   |   | Count objects by pairing each object with one number 1 to 10; determine how many objects there are. | smma_lo_02092  |

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| K.CC.B.4.c  | Understand that each successive number name refers to a quantity that is one larger.  | 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  |
| K.CC.B.5  | Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. | Count two sets of objects to find the total (sums 2 to 4).   | smma_lo_00003  |
|   |   | Count objects arranged in a row (1-5 objects).   | smma_lo_00933  |
|   |   | 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  |
|   |   | 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  |
|   |   | R: Move objects to show a one-to-one correspondence (1 to 5 objects).  | smma_lo_00925  |
|   |   | K.CC.C.6   | Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Include groups with up to ten objects) |
| Identify a group with more objects than a given group (1 to 5 objects).                 | smma_lo_00923   |  |  |
| Identify a group with fewer objects than a given group (1 to 5 objects).                | smma_lo_00924   |  |  |
| Make a set with the same number of objects as a given set (1 to 5 objects).             | smma_lo_00926   |  |  |
| Make a group with one more object than a given group (one to five objects).             | smma_lo_00927   |  |  |
| Make a group with one fewer object than a given group (1 to 5 objects).                 | smma_lo_00928   |  |  |
| Make a group with the same number of objects as a given group (6 to 9 objects).         | smma_lo_00929   |  |  |
| Make a group with one more object than a given group (six to nine objects).             | smma_lo_00930   |  |  |
| Make a group with one fewer object than a given group (6 to 9 objects).                 | smma_lo_00931   |  |  |
| Create a set with the same, more, or fewer number of objects than a given group (1 to 9 | smma_lo_00953   |  |  |
| Create a set with one more object than a given set (1 to 9 objects).                    | smma_lo_00954   |  |  |
| Create a set with one fewer object than a given set (1 to 9 objects).                   | smma_lo_00955   |  |  |
| Identify the group with the greatest number of shapes of a given type (1 to 6).         | smma_lo_00959   |  |  |

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| K.CC.C.7   | Compare two numbers between 1 and 10 presented as written numerals.   | Identify a number that is greater than or less than a spoken number (1 to 9).                        | smma_lo_00946 |
|  |   | Identify the number with the greatest value (1 to 9).  | smma_lo_00947 |
|  |   | Identify whole numbers on a number line that satisfy the inequality (0 to 10).                       | smma_lo_01023 |
| K.G.A.1  | Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. | Identify the object on the top, in the middle, or on the bottom.                                     | smma_lo_00524 |
|  |   | Identify the object on the left or the right.  | smma_lo_00525 |
|  |   | Identify the picture on the left or right.   | smma_lo_00526 |
|  |   | Identify the object inside or outside a convex figure.   | smma_lo_00532 |
|  |   | Identify the object that is the top, middle or bottom one.   | smma_lo_00540 |
|  |   | Identify the object that is the top, middle, or bottom one.  | smma_lo_00543 |
|  |   | Determine whether points are outside, inside, or on a geometric figure.                              | smma_lo_00552 |
|  |   | Identify the object modeled by a geometric figure.   | smma_lo_00570 |
|  |   | Identify the object that is near or far from another object.   | smma_lo_00574 |
|  |   | Identify objects inside or outside a convex figure.  | smma_lo_00575 |
|  |   | Identify the object behind or in front of another object in a three-dimensional perspective.         | smma_lo_00584 |
|  |   | Move an object to a specified location (upper left, upper right, lower left, or lower right corner). | smma_lo_00590 |
|  |   | R: Match pictures with shapes that are alike.  | smma_lo_00517 |
|  |   | R: Match the face of a geometric solid to a plane figure.  | smma_lo_00518 |
| R: Identify the rectangle with the same size and shape as a given rectangle. | smma_lo_00736   |  |               |
| K.G.A.2  | Correctly name shapes regardless of their orientations or overall size. squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres                             | Identify circles or squares by name.   | smma_lo_00529 |
|  |   | Identify triangles or rectangles by name.  | smma_lo_00530 |
|  |   | Identify a geometric figure (circle, triangle, rectangle, or square).                                | smma_lo_00531 |
|  |   | Identify circles or squares by name.   | smma_lo_00544 |
|  |   | Identify triangles or rectangles by name.  | smma_lo_00546 |
|  |   | Identify 3-, 4-, and 5-sided figures.  | smma_lo_00550 |
|  |   | Identify a shape by two positive tests, e.g., red, circle.   | smma_lo_00565 |
|  |   | Match a geometric figure to its name (circle, triangle, square, or rectangle).                       | smma_lo_00568 |
| Identify the figure that is not of a given type (rectangle or triangle).     | smma_lo_00571   |  |               |

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| K.G.A.2  | Correctly name shapes regardless of their orientations or overall size. squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres  | Count the geometric figures in a picture.   | smma_lo_00572 |
|  |  | 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 |
| K.G.A.3  | Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").  | Sort two-dimensional and three-dimensional shapes.  | smma_lo_01677 |
| K.G.B.4  | Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). | Match same size and shape (congruent) irregular polygons.                                   | smma_lo_00545 |
|  |  | 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 |
|  |  | 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 |
|  |  | Count the corners (vertices) of a polygon (3 to 7 corners).                                 | smma_lo_00596 |
|  |  | R: Match simple geometric figures that have the same size, shape, and color.                | smma_lo_00514 |
|  |  | R: Match pictures that are identical.   | smma_lo_00515 |
|  |  | R: Match geometric figures that have the same size and shape (simple figures).              | smma_lo_00516 |
|  |  | R: Move puzzle pieces to complete a puzzle (2 pieces).                                      | smma_lo_00534 |
| R: Match a shape to a picture containing that shape. | smma_lo_00548  |   |               |
| R: Identify shapes that are alike.                   | smma_lo_00549  |   |               |
| K.G.B.5  | Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.   | Connect points on a geoboard to copy a figure.  | smma_lo_00611 |
| K.MD.A.1   | Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.  | R: Identify the tool for a particular use (thermometer, scale, clock).                      | smma_lo_00761 |

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| K.MD.A.2    | Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.   | 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 |
| K.MD.B.3    | Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.   | 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 |
|             |   | Classify geometric figures by a shape attribute.                                     | smma_lo_00576 |
|             |   | Identify a pair of objects that are not the same size.                               | smma_lo_00692 |
|             |   | R: Use logical reasoning to identify the item that does not belong in a group.       | smma_lo_01227 |
|             |   | R: Formulate questions around numerical data.  | smma_lo_01642 |
| K.NBT.A.1   | Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. | Find a number equal to 2 to 9 ones.  | smma_lo_00972 |
|             |   | Enter the number equal to 1 to 9 ones.   | smma_lo_00973 |
|             |   | Decompose numbers from 11 to 19 into ten ones and some further ones.                 | smma_lo_02094 |
|             |   | Compose numbers from 11 to 19 given ten ones and some further ones by using objects. | smma_lo_02095 |
| K.OA.A.1    | Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. (Drawings need not show details, but should show the mathematics in the problems. This applies wherever drawings are mentioned in the Standards.)           | 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 displayed horizontally (sums 6 to 10).                    | smma_lo_00013 |
|             |   | Identify sets of objects that combined have a given sum (sums 6 to 9).               | smma_lo_00726 |
|             |   | 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 |

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| K.OA.A.1    | Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. (Drawings need not show details, but should show the mathematics in the problems. This applies wherever drawings are mentioned in the Standards.) | 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_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 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 |
|             |   | Model and apply joining stories to solve problems (sums 1 to 9).                                   | smma_lo_01863 |
|             |   | R: Identify the picture that represents a subtraction problem in context (minuends 2 to 10).       | smma_lo_01542 |
| K.OA.A.2    | Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.  | Add zero to a number (sums 1 to 9).  | smma_lo_00035 |
|             |   | Solve a subtraction problem in context (minuends 2 to 5, pictorial models).                        | smma_lo_01411 |
|             |   | 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 |
|             |   | R: Write an addition number sentence to represent a picture (sums 1 to 9).                         | smma_lo_00036 |
| K.OA.A.3    | Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$ ).  | Decompose numbers 2–10 into pairs in more than one way by using objects.                           | smma_lo_02096 |
| K.OA.A.4    | For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.   | Model the number that makes 10 when added to a given number from 1 to 9; then identify the number. | smma_lo_02097 |
| K.OA.A.5    | Fluently add and subtract within 5.   | 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 |
|             |   | Subtract using basic math facts displayed horizontally (minuends 0 to 5).                          | smma_lo_01415 |
|             |   | Subtract using basic math facts (minuends 0 to 5).   | smma_lo_01416 |

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| 1.G.A.1     | Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.  | R: Identify open and closed figures.  | smma_lo_00580 |
|             |  | R: Match compound figures that have the same shape (different sizes).   | smma_lo_00594 |
| 1.G.A.2     | Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as "right rectangular prism.")             | Identify puzzle pieces needed to make a given shape, and then complete the puzzle (4 to 6 pieces).                          | smma_lo_00564 |
|             |  | R: Match a plane figure to a geometric design that uses the figure.   | smma_lo_00554 |
| 1.G.A.3     | Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.   | Describe fractions in terms of the number of parts in a whole and the relative size of those parts (e.g., larger, smaller). | smma_lo_02137 |
| 1.MD.A.1    | Order three objects by length; compare the lengths of two objects indirectly by using a third object.  | Order three objects by length.  | smma_lo_02147 |
|             |  | R: Match objects of the same height (3 heights).  | smma_lo_00687 |
|             |  | R: Match objects of the same length (3 lengths).  | smma_lo_00688 |
|             |  | R: Given 3 objects, Identify the shortest or longest object.  | smma_lo_00693 |
| 1.MD.A.2    | Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps. | 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 |
|             |  | Measure the length of an object (2 to 7 nonstandard units).   | smma_lo_00777 |
|             |  | R: Identify the group of objects that is 1 to 5 nonstandard units long or tall.   | smma_lo_00701 |

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| 1.MD.A.2    | Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps. | R: Count to find how long or tall (2 to 9 nonstandard units).   | smma_lo_00705 |
|             |  | R: Identify an object given the height and width in nonstandard units.  | smma_lo_00725 |
|             |  | R: Find the distance between two objects (2 to 8 nonstandard units).  | smma_lo_00732 |
| 1.MD.B.3    | Tell and write time in hours and half-hours using analog and digital clocks.   | Tell time to the hour using an analog clock.  | smma_lo_00714 |
|             |  | Tell time to the hour using digital and analog clocks.  | smma_lo_00716 |
|             |  | Tell time to the half-hour using an analog clock.   | smma_lo_00724 |
|             |  | R: Identify the hour or minute hand of a clock.   | smma_lo_00697 |
| 1.MD.C.4    | Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.   | Read and interpret a horizontal or vertical pictograph (four to six items).   | smma_lo_00131 |
|             |  | Determine the most or the least from a horizontal or vertical pictograph (four to six items).   | smma_lo_00135 |
|             |  | Read and interpret a horizontal or vertical pictograph (six items).   | smma_lo_00150 |
|             |  | Read a pictograph (3 categories, 1 to 9 items per category).  | smma_lo_01124 |
|             |  | Create a table from a vertical bar graph.   | smma_lo_01132 |
|             |  | Within the context of repeated selections without replacement from a bag containing two balls of the same color, label events as certain or impossible. | smma_lo_01141 |
|             |  | Read and interpret a pictograph about birds counted (2 to 5 birds in each row).   | smma_lo_01299 |
|             |  | R: Match each set of tally marks to a total (1 to 9).   | smma_lo_00952 |
| 1.NBT.A.1   | Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.   | Identify a written number from a spoken number (two-digit).   | smma_lo_00977 |
|             |  | Enter the number for a word name (two-digit).   | smma_lo_01001 |
| 1.NBT.B.2a  | Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as a special case: 10 can be thought of as a bundle of ten ones — called a "ten."  | 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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|--|--|---|---------------|
| 1.NBT.B.2b   | Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as a special case: The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.   | Model the numbers from 11 to 19 with place value blocks.  | smma_lo_02018 |
| 1.NBT.B.2c   | Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).   | Enter the number equal to 1 to 9 tens.  | smma_lo_00974 |
|  |  | Enter the number of tens for a given multiple of ten (10 to 90).  | smma_lo_00975 |
|  |  | Model multiples of 10 (from 10 to 90) with place value blocks.  | smma_lo_02019 |
| 1.NBT.B.3  | Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$ , $=$ , and $<$ .   | Compare numbers using $<$ or $>$ symbols (20 to 99).  | smma_lo_00328 |
|  |  | Identify two numbers that make an inequality true (two-digit).  | smma_lo_00997 |
|  |  | Find two numbers within a range (two-digit).  | smma_lo_00998 |
|  |  | Identify the greatest or least number (two-digit).  | smma_lo_00999 |
|  |  | Identify the value that is greater than one number and less than another in context.                        | smma_lo_01554 |
|  |  | R: Compare numbers using $<$ or $>$ symbols (1 to 19).  | smma_lo_00325 |
|  |  | R: Compare sums (sums 1 to 9).  | smma_lo_00326 |
|  |  | R: Compare differences (minuends 1 to 9).   | smma_lo_00337 |
| R: Identify two numbers that make an inequality true (0 to 9). | smma_lo_00994  |   |               |
| 1.NBT.C.4  | Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. | Add two multiples of 10 (student choice, sums 20 to 90).  | smma_lo_00025 |
|  |  | Add two addends (one- and two-digit addends, sums 11 to 99, no regrouping).                                 | smma_lo_00033 |
|  |  | Add two addends (student choice, a one-digit and a two-digit addend, sums 20 to 98, regrouping).            | smma_lo_00054 |
|  |  | Find a number that is one less or one more than a given number (two-digit).                                 | smma_lo_00984 |
| 1.NBT.C.5  | Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.   | Mentally find 10 more or 10 less than a given two-digit number; model the solution with place value blocks. | smma_lo_02020 |

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| CA Standard | CA Standard Text   | Item Description  | Item ID       |
|-------------|--|---|---------------|
| 1.NBT.C.6   | Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. | Subtract two multiples of 10 (student choice, minuends 20 to 90, subtrahends 10 to 80).                               | smma_lo_01426 |
|             |  | 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 |
| 1.OA.A.1    | Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.  | 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 |
|             |  | Solve an addition problem in context (different objects, sums 2 to 5).  | smma_lo_01544 |
|             |  | Solve a subtraction problem in context (minuends 2 to 5).   | smma_lo_01545 |
|             |  | Solve a problem in context by finding a missing addend (sums 2 to 5).   | smma_lo_01546 |
|             |  | Solve a subtraction problem in context by finding how many more (minuends 2 to 5).                                    | smma_lo_01550 |
|             |  | Identify and solve a number sentence for an addition problem in context (sums 2 to 9).                                | smma_lo_01553 |
|             |  | Identify and solve a number sentence for an addition problem in context (sums 2 to 9).                                | smma_lo_01555 |
|             |  | Identify the expression that represents a subtraction problem in context (minuends 2 to 5).                           | smma_lo_01559 |
|             |  | Identify and solve the number sentence for a subtraction problem in context (minuends 2 to 5).                        | smma_lo_01562 |
|             |  | Identify and solve a number sentence for a subtraction problem in context (minuends 2 to 5).                          | smma_lo_01568 |
|             |  | R: Identify the operation from pictures and contexts (sums 6 to 9, minuends 6 to 9).                                  | smma_lo_00321 |
|             |  | R: Identify a picture that represents a subtraction problem (one or two-digit).                                       | smma_lo_01244 |
|             |  | R: Identify the picture that can be used to solve an addition or subtraction problem.                                 | smma_lo_01255 |
|             |  | R: Identify the number sentence that solves a subtraction problem in context (minuends 11 to 18, subtrahends 1 to 9). | smma_lo_01439 |

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| CA Standard   | CA Standard Text   | Item Description  | Item ID       |
|---|--|---|---------------|
| 1.OA.A.2  | Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.  | Act out the problem to find the sum (basic facts).  | smma_lo_01241 |
|   |  | Identify a number sentence that can be used to solve a word problem with extra information (addition or subtraction, basic facts).    | smma_lo_01242 |
|   |  | Act out a problem to find the sum of three numbers (one-digit addends).   | smma_lo_01249 |
|   |  | Act out the solution to an addition problem in context (three addends, sums 1 to 9).  | smma_lo_01537 |
|   |  | Solve an addition problem with three addends in context (sums 3 to 10).   | smma_lo_01549 |
|   |  | Solve an addition problem with three addends in context (sums 3 to 10).   | smma_lo_01557 |
|   |  | Solve an addition problem in context (three addends, sums 9 to 18).   | smma_lo_01576 |
|   |  | R: Add three addends (sums 2 to 5).   | smma_lo_00026 |
|   |  | R: Add three addends (audio presentation, sums 3 to 5).   | smma_lo_00027 |
|   |  | R: Add three addends (sums 6 to 10).  | smma_lo_00028 |
|   |  | R: Add three addends displayed horizontally (sums 6 to 10).   | smma_lo_00029 |
|   |  | R: Add three addends (one-digit addends, sums 11 to 19).  | smma_lo_00031 |
|   |  | R: Add three addends (one-digit addends, sums 10 to 19).  | smma_lo_00032 |
|   |  | R: Find the missing addend in a number sentence (three addends, sums 1 to 9).   | smma_lo_00052 |
| R: Find the missing addend in a number sentence (three addends, sums 10 to 19). | smma_lo_00066  |   |               |
| 1.OA.B.3  | Apply properties of operations as strategies to add and subtract. Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$ , the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$ . (Associative property of addition.) (Students need not use formal terms for these properties.) | 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 |
|   |  | 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 |
| 1.OA.B.4  | Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.   | Solve a subtraction problem by finding the missing addend.  | smma_lo_02023 |

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|-------------|---|---|---------------|
| 1.OA.C.6    | Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$ , one knows $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$ ). | 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 four addends (one-digit addends, sums 3 to 10).   | smma_lo_00030 |
|             |   | Add 10 to a number (sums 11 to 19).   | smma_lo_00038 |
|             |   | Add 1- and 2-digit addends (sums 11-19, audio presentation).                                    | smma_lo_00039 |
|             |   | Add two addends (sums 10 to 18).  | smma_lo_00041 |
|             |   | Add using basic math facts displayed horizontally (sums 10 to 18).                              | smma_lo_00042 |
|             |   | Add 9 to a number (sums 10 to 18).  | smma_lo_00045 |
|             |   | 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 |
|             |   | Subtract 1 from a number (two-digit minuends, no regrouping).                                   | smma_lo_01427 |
|             |   | 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 |

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| CA Standard  | CA Standard Text  | Item Description  | Item ID       |
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| 1.OA.C.6   | Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$ , one knows $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$ ). | 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 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 |
| 1.OA.D.7   | Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$ , $7 = 8 - 1$ , $5 + 2 = 2 + 5$ , $4 + 1 = 5 + 2$ .  | Determine if equations involving addition and subtraction are true or false.  | smma_lo_02024 |
| 1.OA.D.8   | Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations: $8 + ? = 11$ , $5 = - 3$ , $6 + 6 = ?$   | 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   |   |               |

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| 1.OA.D.8    | Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations: $8 + ? = 11$ , $5 = - 3$ , $6 + 6 = ?$  | 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 |
|             |  | 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 |
| 2.G.A.1     | Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. (Sizes are compared directly or visually, not compared by measuring.)                                    | Identify a shape with positive and negative tests.  | smma_lo_00578 |
|             |  | Identify polygons and circles (pentagons, hexagons, octagons, parallelograms).                | smma_lo_00627 |
| 2.G.A.2     | Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.   | Count squares to find the area (2 to 8 units).  | smma_lo_00706 |
| 2.G.A.3     | Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. | R: Match halves of figures (left and right).  | smma_lo_00561 |
|             |  | R: Match halves of figures (top and bottom).  | smma_lo_00563 |
| 2.MD.A.1    | Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.  | Measure the length of an object to the nearest inch (2 to 6 inches).                          | smma_lo_00703 |
|             |  | Measure the length of an object to the nearest centimeter (3 to 12 cm).                       | smma_lo_00750 |
|             |  | Measure the length of an object to the nearest inch (1 to 6 inches).                          | smma_lo_00755 |
|             |  | Measure the length of an object to the nearest centimeter (4 to 12 centimeters).              | smma_lo_00762 |
|             |  | Measure the length of an object in centimeters or inches (whole numbers).                     | smma_lo_00785 |
|             |  | R: Identify a vertical distance (2 to 9 centimeters).   | smma_lo_00758 |

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| 2.MD.A.1    | Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.  | R: Identify the reasonable length of an object (inches, feet, and yards).                                | smma_lo_00780 |
|             |  | R: Select the appropriate ruler to measure vertical or horizontal lengths.                               | smma_lo_00812 |
| 2.MD.A.2    | Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.  | Measure the length of an object in cm and inches; relate the two measurements to the sizes of the units. | smma_lo_02003 |
| 2.MD.A.3    | Estimate lengths using units of inches, feet, centimeters, and meters.   | Identify an object given the estimated height and width in customary units.                              | smma_lo_00728 |
| 2.MD.A.4    | Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.  | Measure two objects in inches; determine how much longer one object is than the other.                   | smma_lo_02015 |
| 2.MD.B.5    | Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. | Find the total length of two to four objects laid end to end (2 to 6 inches).                            | smma_lo_00748 |
|             |  | 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 |
| 2.MD.B.6    | Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.                        | Find a missing number on a number line (0 to 9).   | smma_lo_00961 |
|             |  | Find a number that is one fewer or one greater than a given number (1 to 9), number line in feedback.    | smma_lo_00962 |
|             |  | Identify two numbers within a range (1 to 9), number line in feedback.                                   | smma_lo_00963 |
|             |  | Identify a number on a number line between two given numbers (1 to 9).                                   | smma_lo_00993 |
|             |  | Find a missing number for a point on a number line (two-digit).  | smma_lo_00996 |
|             |  | Find the missing numbers on a number line counting by 3's or 9's (3 to 81).                              | smma_lo_01034 |
|             |  | Enter a number on a partially numbered number line (100 to 999).   | smma_lo_01037 |
| 2.MD.C.7    | Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. Know relationships of time (e.g., minutes in an hour, days in a month, weeks in a year).   | 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 |
| 2.MD.C.8    | Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?   | 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 |
|             |  | Write the value of a set of dimes in dollar form (\$1.10 to \$3.90).                                     | smma_lo_00183 |

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|--|--|--|---------------|
| 2.MD.C.8   | Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?   | Enter the amount of money shown (1 to 5 cents in pennies).   | smma_lo_00699 |
|  |  | Enter the amount of money shown (6 to 9 cents in pennies).   | smma_lo_00704 |
|  |  | Enter the amount of money shown (11 to 50 cents in pennies and dimes).   | smma_lo_00715 |
|  |  | Enter the amount of money shown (10 to 19 cents in pennies, nickels, and dimes).                               | smma_lo_00722 |
|  |  | Find equivalence of nickels and dimes (1 to 5 dimes).  | smma_lo_00738 |
|  |  | Identify the given amount of money in coins (5 to 50 cents in nickels and dimes).                              | smma_lo_00740 |
|  |  | Show another way to represent an amount of money (10 to 24 cents in pennies, nickels, and dimes).              | smma_lo_00745 |
|  |  | 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 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 solve a multiplication problem involving total cost (2 to 5 items, 5, 10, or 15 cents each). | smma_lo_01584 |
|  |  | Find the total value of a group of quarters, dimes, nickels, and pennies (sums to \$1.65).                     | smma_lo_01611 |
|  |  | R: Determine the number of cents in 1 to 100 pennies, 1 to 20 nickels, or 1 to 10 dimes.                       | smma_lo_00143 |
|  |  | R: Identify nickels or dimes.  | smma_lo_00698 |
|  |  | R: Identify the coin worth 1, 5, 10, or 25 cents.  | smma_lo_00702 |
| R: Identify the coin equivalent to 5, 10, or 25 pennies. | smma_lo_00727  |  |               |
| 2.MD.D.9   | Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. | R: Analyze a line plot to find the total number of items that fall at, above, or below a given value.          | smma_lo_01156 |

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| CA Standard | CA Standard Text  | Item Description  | Item ID       |
|-------------|---|---|---------------|
| 2.MD.D.10   | Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. | Read and interpret a horizontal or vertical pictograph (four to six items).   | smma_lo_00138 |
|             |   | Create a vertical bar graph from a table and interpret data in the graph.   | smma_lo_01130 |
|             |   | Interpret the shorter or taller bar of a vertical bar graph as having fewer or more items.  | smma_lo_01131 |
|             |   | Identify the two-column vertical bar graph that shows one category has fewer than, the same number as, or more than the other category. | smma_lo_01133 |
|             |   | Identify the vertical bar graph that shows a strictly increasing or decreasing trend.   | smma_lo_01135 |
|             |   | Collect, tally, and graph the results generated by a spinner.   | smma_lo_01144 |
|             |   | Construct a vertical bar graph based on data from a horizontal bar graph.   | smma_lo_01146 |
|             |   | Identify the number of categories in a vertical bar graph that are less than, equal to, and greater than a given value.                 | smma_lo_01148 |
|             |   | Construct a horizontal bar graph based on data from a vertical bar graph.   | smma_lo_01150 |
|             |   | 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 |
|             |   | R: Identify a vertical bar graph that represents data in a table.   | smma_lo_01134 |
|             |   | R: Identify the table that represents the data in a vertical bar graph.   | smma_lo_01136 |
|             |   | R: Label the categories of a vertical bar graph based on data from a table.   | smma_lo_01138 |
|             |   | R: Analyze a bar graph to find the number of bars that fall within a given range.   | smma_lo_01154 |
|             |   | R: Create a table based on data from a bar graph.   | smma_lo_01645 |
| 2.NBT.A.1a  | Understand the following as a special case: 100 can be thought of as a bundle of ten tens—called a "hundred."   | Given a number (1-9) of groups of 10 objects, determine how many more groups of 10 objects are needed to make a hundred.                | smma_lo_02011 |
| 2.NBT.A.1b  | Understand the following as a special case: The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).                    | Find a number equal to 1 to 9 hundreds.   | smma_lo_01007 |
|             |   | Find the number of hundreds equivalent to a multiple of 100 (100 to 900).   | smma_lo_01008 |

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| 2.NBT.A.2   | Count within 1000; skip-count by 2s, 5s, 10s, and 100s.   | 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 2's (0 to 10).   | smma_lo_00966 |
|             |   | Find the missing two-digit number in a sequence of odd or even numbers.   | smma_lo_01002 |
|             |   | 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 |
|             |   | Count by 2's, 4's, 5's, or 10's (2 to 20, 4 to 40, 5 to 50, 80 to 200).   | smma_lo_01030 |
|             |   | Find the missing number in a sequence, counting by 5's or 10's.   | smma_lo_01231 |
| 2.NBT.A.3   | Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.  | Identify the word name for a three-digit number.  | smma_lo_01009 |
|             |   | Identify the number represented by a set of objects (pictorial models of hundreds, tens, and ones; three-digit).    | smma_lo_01010 |
|             |   | Identify the number, model, word name, or expanded notation that has a different value (three-digit).               | smma_lo_01018 |
|             |   | Enter the number for a word name (100 to 999).  | smma_lo_01042 |
|             |   | Find a number equal to 1 to 9 hundreds, 0 to 9 tens, and 0 to 9 ones.   | smma_lo_01047 |
| 2.NBT.A.4   | Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$ , $=$ , and $<$ symbols to record the results of comparisons. | Compare sums (two-digit addends, multiples of 10).  | smma_lo_00334 |
|             |   | Identify the greatest or least number (three-digit).  | smma_lo_01019 |
|             |   | Find a number between two given numbers (1 to 999).   | smma_lo_01020 |
|             |   | 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 |
|             |   | R: Identify four numbers that are in consecutive order (three-digit).   | smma_lo_01021 |
| 2.NBT.B.5   | Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.   | Add a multiple of 10 and a one-digit number displayed horizontally (sums 11 to 99).                                 | smma_lo_00040 |
|             |   | Add two multiples of 10 displayed horizontally (sums 20 to 90).   | smma_lo_00044 |
|             |   | Add two addends displayed horizontally (one- and two-digit addends, sums 11 to 99).                                 | smma_lo_00049 |
|             |   | Find the sum of two numbers displayed horizontally (a one-digit and a two-digit addend, sums 20 to 98, regrouping). | smma_lo_00055 |

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|--|---|---|---------------|
| 2.NBT.B.5  | Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. | Add three addends displayed horizontally (one-digit addends, sums 20 to 27).  | smma_lo_00062 |
|  |   | Add two addends displayed horizontally (two-digit addends, sums 21 to 99).  | smma_lo_00064 |
|  |   | 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 |
|  |   | Find the missing addend in a number sentence (three addends, sums 20 to 27, regrouping).                                | smma_lo_00082 |
|  |   | Find the missing addend in a number sentence (two addends, sums 20 to 98, regrouping).                                  | smma_lo_00084 |
|  |   | Solve for a or b in $a + b = c$ (sums 10 to 108).   | smma_lo_00336 |
|  |   | Solve for c in $a - b = c$ (minuends 20 to 99, subtrahends 1 to 9, no regrouping).                                      | smma_lo_00338 |
|  |   | Solve for c in $a - b = c$ (minuends 20 to 99, two-digit subtrahends, no regrouping).                                   | smma_lo_00340 |
|  |   | Solve for a or b in $a + b = c$ (sums 12 to 98).  | smma_lo_00341 |
|  |   | Solve for c in $a - b = c$ (minuends 20 to 99, regrouping).   | smma_lo_00342 |
|  |   | Solve for a or b in $a - b = c$ (minuends 20 to 99, no regrouping).   | smma_lo_00343 |
|  |   | Solve for a or b in $a - b = c$ (minuends 21 to 99, subtrahends 1 to 9, no regrouping).                                 | smma_lo_00347 |
|  |   | Find 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 |
|  |   | Subtract (student choice, minuends 21 to 95, subtrahends 1 to 9, no regrouping).  | smma_lo_01428 |
|  |   | 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   |   |               |

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|-------------|---|--|---------------|
| 2.NBT.B.5   | Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. | 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 |
|             |   | 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 |
| 2.NBT.B.6   | Add up to four two-digit numbers using strategies based on place value and properties of operations.  | Add three multiples of 10 (student choice, sums 30 to 90).   | smma_lo_00043 |
|             |   | Add three multiples of 10 (sums 100 to 190, regrouping).   | smma_lo_00051 |
|             |   | Add three addends (two-digit addends, sums 33 to 99, no regrouping).   | smma_lo_00056 |
|             |   | Add three addends (student choice, two-digit addends, sums 100 to 199, regrouping from tens to hundreds place).        | smma_lo_00060 |
|             |   | Add three addends (student choice, one-digit and two-digit addends, sums 21 to 99, no regrouping).                     | smma_lo_00079 |
|             |   | Add three addends (student choice, one- and two-digit addends, sums 100 to 198, no regrouping).                        | smma_lo_00087 |
|             |   | Add three addends (student choice, one- and two-digit addends, sums 30 to 98, regrouping).                             | smma_lo_00090 |
|             |   | 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 |

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|---|--|---|---------------|
| 2.NBT.B.7   | Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. | Add two multiples of 100 (student choice, sums 200 to 900).   | smma_lo_00046 |
|   |  | Add two multiples of 10 (student choice, sums 100 to 180).  | smma_lo_00047 |
|   |  | Add two addends (student choice, two-digit addends, sums 100 to 189, regrouping 10's to 100's).                                       | smma_lo_00053 |
|   |  | Add two 3-digit numbers without regrouping (sums 200-999).  | smma_lo_00058 |
|   |  | Add two addends (student choice, a two-digit and a three-digit addend, sums 120 to 998, regrouping).                                  | smma_lo_00059 |
|   |  | Add 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 |
|   |  | 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 |
|   |  | Find the missing addend in an number sentence (a two-digit and a three-digit addend, multiples of 10, sums 110 to 990).               | smma_lo_00088 |
|   |  | Solve for a or b in $a + b = c$ (sums 101 to 199, no regrouping).   | smma_lo_00345 |
|   |  | Find a number that is one fewer, one greater, just before, or just after a three-digit number.  | smma_lo_01016 |
|   |  | Find the sum or difference when ones, tens, or hundreds are added to or subtracted from a three-digit number (base-ten block models). | smma_lo_01017 |
|   |  | Subtract two multiples of 100 (student choice, minuends 200 to 900, subtrahends 100 to 800).  | smma_lo_01447 |
| Subtract two multiples of 10 (minuends 100 to 180, subtrahends 10 to 90). | smma_lo_01448  |   |               |

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| 2.NBT.B.7   | Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. | Subtract (student choice, minuends 110 to 199, two-digit subtrahends, no regrouping).   | smma_lo_01456 |
|   |  | Subtract (student choice, minuends 122 to 199, subtrahends 11 to 88, no regrouping).  | smma_lo_01457 |
|   |  | Subtract a three-digit multiple of 10 from a number (student choice, minuends 222 to 999, no regrouping).   | smma_lo_01458 |
|   |  | Subtract (student choice, minuends and subtrahends 110 to 999).   | smma_lo_01460 |
|   |  | Find the difference of two three-digit numbers.   | smma_lo_01467 |
|   |  | Find the difference of two three-digit numbers (no regrouping).   | smma_lo_01469 |
|   |  | Find the difference of two whole numbers (student choice, three-digit minuends, two-digit subtrahends, regrouping from hundreds place to tens place). | smma_lo_01471 |
|   |  | Find the difference of two whole numbers (student choice, three-digit minuends, two-digit subtrahends, regrouping from tens place to ones place).     | smma_lo_01475 |
|   |  | Find the difference of two three-digit numbers (student choice, no regrouping).   | smma_lo_01477 |
|   |  | Find the difference of two whole numbers (student choice, minuends 201 to 999, subtrahends 11 to 99, regrouping).                                     | smma_lo_01479 |
|   |  | Find the difference of two whole numbers (student choice, three-digit minuends, two-digit subtrahends, regrouping from hundreds place to tens place). | smma_lo_01481 |
|   |  | Find the difference of two three-digit numbers (student choice, regrouping from the tens to the ones place).  | smma_lo_01483 |
|   |  | Find the difference of two three-digit numbers (student choice, regrouping from the tens to the ones place).  | smma_lo_01485 |
|   |  | Find the difference of two three-digit numbers (student choice, regrouping from the tens to the ones place).  | smma_lo_01487 |
|   |  | Find the difference of two whole numbers (student choice, regrouping from tens place to ones place and hundreds place to tens place).                 | smma_lo_01489 |
| Find the difference of two three-digit numbers (student choice, regrouping from the tens to the ones place and the hundreds to the tens place). | smma_lo_01490  |   |               |
| Subtract a two-digit number from a three-digit number (regrouping from the tens place and hundreds place).                                      | smma_lo_01492  |   |               |

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| 2.NBT.B.7.1   | Use estimation strategies to make reasonable estimates in problem solving.   | Estimate the number of objects to the nearest ten (21 to 49 objects).  | smma_lo_01548 |
| 2.NBT.B.8   | Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.   | Add two addends (100 and a three-digit number, sums 200 to 900).   | smma_lo_00057 |
|   |  | Subtract 100 from a three-digit number presented in a sentence.  | smma_lo_01459 |
| 2.NBT.B.9   | Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)  | 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 |
| 2.OA.A.1  | Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. | 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 |
|   |  | Act out the solution to multi-step problem in context (addends, minuends 1 to 4).  | smma_lo_01538 |
|   |  | Make a picture to solve a two-step problem in context (addition and subtraction).  | smma_lo_01551 |
|   |  | Make a picture to solve a two-step problem in context (addition and subtraction).  | smma_lo_01552 |
|   |  | Solve an addition problem in context (two-digit addends, sums less than 100, no regrouping).                                       | smma_lo_01556 |
|   |  | Solve a problem with extra information (addition).   | smma_lo_01558 |
|   |  | Solve a subtraction problem in context (two-digit minuends, one-digit subtrahends, no regrouping).                                 | smma_lo_01560 |
|   |  | Solve a subtraction problem in context to find how much is left (two-digit numbers, no regrouping).                                | smma_lo_01561 |
|   |  | Solve a subtraction problem to find a person's age (minuends 1 to 99, subtrahends 1 to 9, no regrouping).                          | smma_lo_01563 |
|   |  | Solve an addition problem in context (extra information, sums to 50, no regrouping).   | smma_lo_01567 |
| Solve a problem in context by finding a missing addend (three addends, sums to 20). | smma_lo_01574  |  |               |

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| 2.OA.A.1    | Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.   | 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 |
| 2.OA.B.2    | Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (See standard 1.OA.C.6 for a list of mental strategies.)   | Identify the missing number (minuend, subtrahend, or difference) in a subtraction equation, for numbers 20 and less. | smma_lo_02014 |
| 2.OA.C.4    | Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.   | Use repeated addition to multiply (products 2 x 2 to 5 x 5).   | smma_lo_00852 |
|             |  | Solve addition problems with doubles as prelude to multiplication.   | smma_lo_00853 |
|             |  | R: Add doubles (sums 4 to 18).   | smma_lo_00019 |
| 3.G.A.1     | Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. | Identify the quadrilaterals in a set of figures.   | smma_lo_00615 |
|             |  | Identify parallelograms, rhombuses, and trapezoids.  | smma_lo_00620 |
|             |  | Identify the quadrilaterals that are trapezoids or rhombuses.  | smma_lo_00659 |
| 3.G.A.2     | Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.  | 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 |
|             |  | Partition shapes into equal parts.   | smma_lo_02000 |
|             |  | R: Identify the model that is divided into equal parts (2 to 8 parts).   | smma_lo_00400 |
|             |  | R: Count the number of equal parts in a fractional model (2 to 8 parts).   | smma_lo_00402 |
|             |  | R: Identify the figure divided into equal parts (halves to eighths).   | smma_lo_00417 |

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| 3.MD.A.1    | Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.   | 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 |
|             |   | 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 to the minute using digital and analog clocks.  | smma_lo_00771 |
|             |   | Show time 1 to 11 hours and 5 to 55 minutes before or after the time shown (analog and digital clocks).                 | smma_lo_00775 |
|             |   | Find the time 5 to 50 minutes after the time shown (analog clock).  | smma_lo_00798 |
|             |   | Solve a problem by identifying the time 1 to 2 hours after a given time (not crossing 12 o'clock).                      | smma_lo_01547 |
|             |   | Set the digital clock to match the time on the analog clock to the exact minute.  | smma_lo_01670 |
|             |   | Show time 1 to 11 hours and 5 to 55 minutes before or after the time shown (analog and digital clocks).                 | smma_lo_02155 |
| 3.MD.A.2    | Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). <sup>6</sup> Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. <sup>7</sup> | Add units of capacity (pints, sums 2 to 6).   | smma_lo_00764 |
|             |   | Read weights from a chart; choose two weights that equal a given total (sums to 1,500).                                 | smma_lo_01301 |
|             |   | R: Select the appropriate standard unit of measurement for length, capacity, and weight (customary).                    | smma_lo_00729 |
|             |   | R: Add nonstandard units of capacity (sums 2 to 8).   | smma_lo_00739 |
|             |   | R: Subtract nonstandard units of capacity (differences 0 to 3).   | smma_lo_00742 |
|             |   | R: Find the capacity of a container (3 to 10 nonstandard units).  | smma_lo_00754 |
|             |   | R: Select the appropriate standard unit of measurement for length, capacity, and weight (metric).                       | smma_lo_00767 |
|             |   | R: Identify the reasonable weight of an object (ounces, pounds, and tons).  | smma_lo_00787 |
|             |   | R: Choose the appropriate customary units of liquid measure (cups, quarts, and gallons).                                | smma_lo_01674 |

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| 3.MD.B.3    | Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.   | Read and interpret a horizontal pictograph with a scale of 2 (five items).                     | smma_lo_00140 |
|             |  | Make a pictograph from a set of data.  | smma_lo_00146 |
|             |  | Read and interpret a pictograph with a scale of 2, 5 or 10.                                    | smma_lo_01158 |
|             |  | Compare the amounts of two rows in a pictograph whose scale is 2, 5, or 10 items per picture.  | smma_lo_01172 |
|             |  | Compare the amounts of two rows in a pictograph whose scale is 2, 5, or 10 items per picture.  | smma_lo_01174 |
|             |  | Complete and interpret a pictograph.   | smma_lo_01207 |
|             |  | Create a bar graph using data from a chart of values.  | smma_lo_01696 |
|             |  | Create a bar graph.  | smma_lo_01769 |
| 3.MD.B.4    | Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.  | Measure the length of a bar to the nearest $\frac{1}{4}$ inch or 0.5 cm.                       | smma_lo_00822 |
| 3.MD.C.5a   | Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by $n$ unit squares is said to have an area of $n$ square units. | Identify a unit square and what attribute it is used to measure.                               | smma_lo_02027 |
| 3.MD.C.5b   | Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by $n$ unit squares is said to have an area of $n$ square units. | Find the area of a plane figure made up of square units and halves of square units.            | smma_lo_02028 |
| 3.MD.C.6    | Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).  | 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 |

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| 3.MD.C.6    | Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).  | 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 an irregular figure displayed on a grid (12 to 50 square units).   | smma_lo_01280 |
| 3.MD.C.7a   | Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.  | 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 |
| 3.MD.C.7b   | Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning  | Find the area of a rectangle (36 to 144 customary or metric square units).  | smma_lo_00173 |
|             |  | Identify rectangles that have equal areas, but different dimensions.  | smma_lo_00823 |
|             |  | 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 |
| 3.MD.C.7c   | Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths $a$ and $b + c$ is the sum of $a \times b$ and $a \times c$ . Use area models to represent the distributive property in mathematical reasoning.  | Identify equivalent arrays with different factors.  | smma_lo_01715 |
|             |  | Use partial sums and arrays to solve a two-digit by a one-digit multiplication problem.   | smma_lo_01716 |
|             |  | Tile a rectangle to find its area; represent the area of the rectangle in two different ways (length times width and the sum of the areas of two smaller rectangles). | smma_lo_02031 |
| 3.MD.C.7d   | Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non overlapping parts, applying this technique to solve real world problems.   | Find the area of a rectilinear figure in a context by decomposing it into two rectangles.   | smma_lo_02032 |
| 3.MD.D.8    | Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. | Find the perimeter of a rectangle (24 to 48 customary or metric units).   | smma_lo_00169 |
|             |  | Given the length of one side of a rectangle, measure another side, and then find the perimeter.   | smma_lo_00788 |
|             |  | Given the lengths of all sides, find the perimeter of a rectangle.  | smma_lo_00821 |
|             |  | Given a perimeter, mark equilateral polygons with the same side measures.   | smma_lo_00849 |

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| 3.MD.D.8    | Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. | Identify examples of relationships between area and perimeter.  | smma_lo_00850 |
|             |  | R: Count to find the perimeter (3 to 9 nonstandard units).  | smma_lo_00708 |
|             |  | R: Identify the shape with the greater perimeter (3 to 11 nonstandard units).   | smma_lo_00734 |
|             |  | R: Find the perimeter of a figure (3 to 10 nonstandard units).  | smma_lo_00757 |
|             |  | R: Identify the expression for the perimeter of a figure.   | smma_lo_00818 |
| 3.NBT.A.1   | Use place value understanding to round whole numbers to the nearest 10 or 100.   | Round a two-digit number to the nearest ten.  | smma_lo_01028 |
|             |  | Round a three-digit number to the nearest hundred.  | smma_lo_01036 |
|             |  | Identify the best estimate for a sum of two numbers (two-digit addends, round to the nearest 10).                           | smma_lo_01052 |
|             |  | Round a two-digit or three-digit number to the nearest ten.   | smma_lo_01059 |
|             |  | Round a three- to five-digit number to the nearest hundred.   | smma_lo_01081 |
|             |  | Determine the reasonableness of a sum or difference (two- and three-digit numbers).   | smma_lo_01259 |
|             |  | Identify the expression that gives the best estimate for an addition or subtraction problem in context (two-digit numbers). | smma_lo_01566 |
|             |  | 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 |
|             |  | 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 difference (three-digit, differences 100 to 800).  | smma_lo_01676 |
| 3.NBT.A.2   | Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.  | Add two addends (a two-digit and a three-digit addend, sums 111 to 899, regrouping).  | smma_lo_00089 |
| 3.NBT.A.3   | Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., $9 \times 80$ , $5 \times 60$ ) using strategies based on place value and properties of operations.  | Multiply whole numbers (student choice, products $20 \times 2$ to $90 \times 9$ , multiples of 10).                         | smma_lo_00878 |
|             |  | Multiply whole numbers (products $2 \times 20$ to $90 \times 9$ , multiples of 10).   | smma_lo_00885 |

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| 3.NF.A.1    | Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into $b$ equal parts; understand a fraction $a/b$ as the quantity formed by $a$ parts of size $1/b$ . | Identify the set of shapes that represents a fraction (halves, thirds, fourths).               | smma_lo_00406   |
|             |  | Identify the figure showing a fractional part shaded (halves, thirds, fourths).                | smma_lo_00409   |
|             |  | Identify the fraction representing a shaded region (halves, thirds, fourths).                  | smma_lo_00410   |
|             |  | Identify the 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   |
|             |  | 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   |
|             |  | Solve a problem by finding the fractional amount of a set (halves to eighths).                 | smma_lo_00424   |
|             |  | Identify a fractional portion of a set (halves to eighths).                                    | smma_lo_00425   |
|             |  | Partition shapes into equal parts.   | smma_lo_02000   |
|             |  | Model a fraction $a/b$ by filling in $a$ out of $b$ sections in a fraction model.              | smma_lo_02034   |
|             |  | R: Count the fractional parts and total number of parts in a region (halves, thirds, fourths). | smma_lo_00403   |
|             |  | R: Match the word name of a fraction to a fraction (halves, thirds, fourths).                  | smma_lo_00411   |
|             |  | R: Count the fractional parts and total number of parts in a set (halves, thirds, fourths).    | smma_lo_00412   |
|             |  | R: Match the word name of the fraction to the fraction (halves to eighths).                    | smma_lo_00416   |
|             |  | R: Count shaded parts and the total number of parts (halves to eighths).                       | smma_lo_00419   |
|             |  | R: Count the shaded and total number of elements in a set (halves to eighths).                 | smma_lo_00423   |
|             |  | 3.NF.A.2a  | Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into $b$ equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line. |

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| 3.NF.A.2b   | Represent a fraction $a/b$ on a number line diagram by marking off $a$ lengths $1/b$ from 0. Recognize that the resulting interval has size $a/b$ and that its endpoint locates the number $a/b$ on the number line.  | Enter the missing fraction on a number line (halves to eighths).  | smma_lo_00430 |
|             |   | Identify a fraction for a given point on a number line divided into tenths, twelfths, or sixteenths.    | smma_lo_00431 |
| 3.NF.A.3a   | Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.   | Model equivalent fractions; identify equivalent fractions on a number line.                             | smma_lo_02035 |
| 3.NF.A.3b   | Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$ , $4/6 = 2/3$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model.   | Using models, find equivalent fractions (halves to sixteenths).   | smma_lo_00433 |
|             |   | 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 |
| 3.NF.A.3c   | Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$ ; recognize that $6/1 = 6$ ; locate $4/4$ and 1 at the same point of a number line diagram.   | Find a fraction equal to 1 (halves to eighths).   | smma_lo_00427 |
|             |   | Using a model, rewrite a whole number as a fraction (halves to eighths).                                | smma_lo_00443 |
| 3.NF.A.3d   | Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using a visual fraction model. | Using a number line, compare fractions (like denominators, halves to sixteenths).                       | smma_lo_00434 |
|             |   | Using models, compare fractions (unlike denominators, numerators equal to one, halves to sixteenths).   | smma_lo_00435 |
|             |   | Compare fractions (like denominators, thirds to sixteenths).  | smma_lo_00447 |
| 3.OA.A.1    | Interpret products of whole numbers (e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each). For example, show objects in rectangular arrays or describe a context in which a total number of objects can be expressed as $5 \times 7$ .  | Make a picture to solve a multiplication problem (basic facts).   | smma_lo_01237 |
|             |   | Identify a picture that represents a multiplication problem (basic facts).                              | smma_lo_01246 |
|             |   | R: Solve addition and multiplication problems (products $2 \times 6$ to $2 \times 9$ ).                 | smma_lo_00854 |

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| 3.OA.A.2    | Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$ . | Make a picture to solve a division problem (math facts).   | smma_lo_01238 |
|             |  | Identify a picture that represents a division problem (math facts).  | smma_lo_01245 |
| 3.OA.A.3    | Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.   | Divide using graphic models (combinations to $5 \times 5$ ).   | smma_lo_00279 |
|             |  | Identify the method to solve a multiplication problem with extra information.  | smma_lo_01267 |
|             |  | Identify the method to solve a division problem with extra information.  | smma_lo_01268 |
|             |  | Identify the missing information needed to solve a multiplication problem in context; then solve the problem.                  | smma_lo_01283 |
|             |  | Make a picture to solve a partitive division problem (dividends to 20).  | smma_lo_01564 |
|             |  | Make a picture to solve a quotitive division problem (dividends to 20).  | smma_lo_01565 |
|             |  | Identify and solve an expression that represents a multiplication problem in context (model shown, products to 32).            | smma_lo_01570 |
|             |  | Find twice the amount of the money shown (products to 20).   | smma_lo_01571 |
|             |  | Solve a multiplication problem in context (counting feedback, products $2 \times 2$ to $5 \times 5$ ).                         | smma_lo_01572 |
|             |  | Solve a multiplication problem in context (repeated addition feedback, products $2 \times 2$ to $5 \times 5$ ).                | 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 $3 \times 4$ to $9 \times 9$ ). | 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 $2 \times 2$ to $9 \times 9$ ).  | smma_lo_01600 |
|             |  | Identify the expression that represents a division problem in context; then solve the problem (dividends 12 to 81).            | smma_lo_01605 |

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| 3.OA.A.3  | Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.  | 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 |
|   |   | R: Identify the number sentence that represents a division problem in context (model shown, dividends to 20). | smma_lo_01569 |
|   |   | R: Create arrays for a given product (products 6 to 30).  | smma_lo_01859 |
| 3.OA.A.4  | Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$ , $5 = ? \div 3$ , $6 \times 6 = ?$ .   | Find the missing dividend or divisor (combinations $4 \times 4$ to $7 \times 7$ ).                            | smma_lo_00285 |
|   |   | Solve for a or b in $a \times b = c$ (products $1 \times 2$ to $5 \times 9$ ).                                | smma_lo_00351 |
|   |   | Solve for a or b in $a \div b = c$ (combinations $1 \times 2$ to $5 \times 5$ ).                              | smma_lo_00352 |
|   |   | Solve for a or b in $a \div b = c$ (combinations $6 \times 6$ to $9 \times 9$ ).                              | smma_lo_00354 |
|   |   | Find the missing factor (products to $5 \times 5$ ).  | smma_lo_00856 |
|   |   | Find the missing factor (products to $5 \times 5$ ).  | smma_lo_00858 |
|   |   | Find the missing factor (products $1 \times 6$ to $5 \times 9$ ).   | smma_lo_00860 |
|   |   | Find the missing factor (products $1 \times 6$ to $5 \times 9$ ).   | smma_lo_00862 |
|   |   | Find the missing factor (products $1 \times 6$ to $9 \times 5$ ).   | smma_lo_00864 |
|   |   | Find the missing factor (products $6 \times 1$ to $9 \times 5$ ).   | smma_lo_00866 |
|   |   | Find the missing factor (products $6 \times 6$ to $9 \times 9$ ).   | smma_lo_00873 |
|   |   | Find the missing factor (products $6 \times 6$ to $9 \times 9$ ).   | smma_lo_00877 |
|   |   | Find the missing factor (products $2 \times 2$ to $12 \times 12$ ).   | smma_lo_00881 |
|   |   | Find the missing factor (products $20 \times 11$ to $90 \times 99$ , multiples of 10).                        | smma_lo_00891 |
| R: Complete fact families with four facts (products $2 \times 3$ to $8 \times 9$ ). | smma_lo_00344   |   |               |
| 3.OA.B.5  | Apply properties of operations as strategies to multiply and divide.2 Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$ , then $15 \times 2 = 30$ , or by $5 \times 2 = 10$ , then $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$ , one can find $8 \times 7$ as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.) | Apply the Commutative Property of Multiplication as a strategy to multiply and divide whole numbers.          | smma_lo_02036 |
|   |   | Apply the Associative Property of Multiplication as a strategy to multiply whole numbers.                     | smma_lo_02037 |
|   |   | Apply the Distributive Property as a strategy to multiply whole numbers.                                      | smma_lo_02038 |

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| 3.OA.B.6  | Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.  | Represent a division problem as an unknown-factor problem; then find the missing factor. | smma_lo_02039 |
| 3.OA.C.7  | Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$ , one knows $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. | Divide using basic facts (combinations $5 \times 5$ ).                                   | smma_lo_00280 |
|   |  | Divide using basic facts (combinations $2 \times 6$ to $9 \times 5$ ).                   | smma_lo_00282 |
|   |  | Divide (combinations $6 \times 6$ to $9 \times 9$ ).                                     | smma_lo_00284 |
|   |  | Divide (combinations $2 \times 10$ to $5 \times 12$ ).                                   | smma_lo_00286 |
|   |  | Divide (combinations $5 \times 9$ to $6 \times 12$ ).                                    | smma_lo_00288 |
|   |  | Divide (combinations $2 \times 13$ to $5 \times 19$ , no remainder).                     | smma_lo_00305 |
|   |  | Solve for $c$ in $a \times b = c$ (products $1 \times 2$ to $5 \times 9$ ).              | smma_lo_00346 |
|   |  | Find the quotient (dividends $6 \times 6$ to $9 \times 9$ ).                             | smma_lo_00349 |
|   |  | Compare products (products $2 \times 2$ to $9 \times 9$ ).                               | smma_lo_00350 |
|   |  | Solve for $c$ in $a \times b = c$ (products $6 \times 2$ to $9 \times 12$ ).             | smma_lo_00353 |
|   |  | Compare quotients (combinations $2 \times 2$ to $9 \times 9$ ).                          | smma_lo_00355 |
|   |  | Multiply whole numbers (products to $5 \times 5$ ).                                      | smma_lo_00855 |
|   |  | Multiply whole numbers (products $6 \times 1$ to $9 \times 5$ ).                         | smma_lo_00857 |
|   |  | Multiply whole numbers displayed horizontally (products $1 \times 6$ to $5 \times 9$ ).  | smma_lo_00859 |
|   |  | Multiply whole numbers (products $1 \times 2$ to $5 \times 5$ ).                         | smma_lo_00861 |
|   |  | Multiply whole numbers (products $1 \times 6$ to $5 \times 9$ ).                         | smma_lo_00863 |
|   |  | Multiply whole numbers (products $6 \times 2$ to $9 \times 5$ ).                         | smma_lo_00865 |
|   |  | Multiply whole numbers (products $6 \times 6$ to $9 \times 9$ ).                         | smma_lo_00867 |
| Multiply whole numbers displayed horizontally (products $6 \times 6$ to $9 \times 9$ ). | smma_lo_00868  |  |               |
| 3.OA.D.8  | Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.  | 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 |
|   |  | Make a picture to find the change received from a purchase (change back from \$1.00).    | smma_lo_01583 |
|   |  | Estimate the distance by rounding ( $d = rt$ ).  | smma_lo_01606 |
|   |  | Solve a two-step multiplication and addition problem in context.                         | smma_lo_01633 |
|   |  | R: Solve for $a$ , $b$ , or $c$ in $a + b + c = d$ (sums 10 to 19).                      | smma_lo_00335 |
|   |  | R: Solve for $d$ in $a + b + c = d$ (one-digit addends, sums 20 to 27).                  | smma_lo_00339 |

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| 3.OA.D.8   | Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.                           | R: Identify the missing operation in a subtraction or addition number sentence (basic facts).  | smma_lo_01031 |
|  |   | R: Identify the missing operation (sums 20 to 99, differences 10 to 70).   | smma_lo_01055 |
|  |   | R: Identify the missing operation in a number sentence (all operations).   | smma_lo_01074 |
|  |   | R: Identify a number sentence that can be used to solve an addition, a subtraction, or a multiplication problem (one- or two-digit). | smma_lo_01254 |
|  |   | R: Identify a number sentence that could be used to solve a multiplication problem.  | smma_lo_01270 |
|  |   | R: Identify extra information in a problem.  | smma_lo_01272 |
|  |   | R: Identify the missing information needed to solve a two-step problem; then solve the problem.                                      | smma_lo_01274 |
|  |   | R: Identify an expression that can be used to solve a problem (inverse operations).  | smma_lo_01275 |
|  |   | R: Solve a problem in context that involves finding the difference of 2 three-digit numbers.   | smma_lo_01610 |
| 3.OA.D.9   | Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends. | Identify if the sum, difference, or product of two numbers is even or odd.   | smma_lo_01086 |
| 4.G.A.1  | Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.  | Identify line segments in three- and four-sided figures.   | smma_lo_00579 |
|  |   | Identify right, acute, and obtuse angles in polygons.  | smma_lo_00630 |
|  |   | 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 |
|  |   | R: Predict whether or not lines will intersect.  | smma_lo_00598 |
|  |   | R: Identify line segments.   | smma_lo_00605 |
|  |   | R: Identify parallel and perpendicular streets on a map.   | smma_lo_00619 |
|  |   | R: Determine whether an angle is larger than, smaller than, or the same size as a right angle.                                       | smma_lo_00624 |
|  |   | R: Identify the set of vertices on a grid can be connected to form a figure (triangle, quadrilateral, rectangle, or square).         | smma_lo_00625 |
| R: Identify an angle as acute, right, or obtuse. | smma_lo_00628   |  |               |

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| 4.G.A.2     | Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles. (Two-dimensional shapes should include special triangles, e.g., equilateral, isosceles, scalene, and special quadrilaterals, e.g., rhombus, square, rectangle, parallelogram, trapezoid.)   | In a set of quadrilaterals, identify all the parallelograms.  | smma_lo_00621 |
|             |  | 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 |
| 4.G.A.3     | Recognize a line of symmetry for a two-Dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.   | Identify the vertical line of symmetry.   | smma_lo_00595 |
|             |  | Identify the horizontal line of symmetry.   | smma_lo_00597 |
|             |  | Draw a vertical or horizontal line of symmetry.   | smma_lo_00608 |
|             |  | Identify lines that are lines of symmetry.  | smma_lo_00623 |
|             |  | Complete a symmetrical drawing.   | smma_lo_00647 |
|             |  | Identify the lines of symmetry in an object.  | smma_lo_01699 |
|             |  | Identify the shape with a given number of lines of symmetry.  | smma_lo_01773 |
| 4.MD.A.1    | Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ... | Compare unlike customary units of length (inches, feet, and yards).                                   | smma_lo_00792 |
|             |  | Identify the reasonable customary capacity of an object (cups, pints, quarts, and gallons).           | smma_lo_00794 |
|             |  | Compare unlike customary units of capacity (cups, pints, quarts, and gallons).                        | smma_lo_00799 |
|             |  | Identify the reasonable length, width, or height of an object (millimeters, centimeters, and meters). | smma_lo_00803 |
|             |  | Identify the reasonable mass for an object (grams and kilograms).                                     | smma_lo_00807 |
|             |  | Identify the reasonable capacity of an object (milliliters and liters).                               | smma_lo_00811 |
|             |  | Compare unlike metric units and identify the correct statement (mm, cm, m, km; mL, L; mg, g, kg).     | smma_lo_00820 |
|             |  | Convert hours to minutes.   | smma_lo_01672 |
|             |  | Identify distances or objects that would be measured in cm, m, or km.                                 | smma_lo_01703 |
|             |  | 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 |

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| CA Standard   | CA Standard Text  | Item Description   | Item ID       |
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| 4.MD.A.2  | Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. | Find the perimeter of a polygon (decimal numbers, metric units).   | smma_lo_00805 |
|   |   | Find a fraction of an hour in minutes ( $\frac{1}{4}$ , $\frac{1}{3}$ , $\frac{1}{2}$ , $\frac{2}{3}$ , or $\frac{3}{4}$ hour).    | smma_lo_00817 |
|   |   | Convert units of time (seconds, minutes, hours, days, weeks, months, and years).   | smma_lo_00837 |
|   |   | Identify the most reasonable answer to a division problem involving money.   | smma_lo_01279 |
|   |   | Solve a division problem about money with extra information (round quotient to the nearest whole number).                          | smma_lo_01585 |
|   |   | Estimate the total cost of four items by rounding to the nearest dollar (sums to \$15.00).   | smma_lo_01591 |
|   |   | Solve an addition problem in context (3 three-digit addends, regrouping).  | smma_lo_01597 |
|   |   | Find the change from one dollar (item costs 55 to 99 cents).   | smma_lo_01598 |
|   |   | Solve a decimal subtraction problem in context (tenths, regrouping).   | smma_lo_01599 |
|   |   | Solve a problem in context that involves adding three amounts expressed as dollars and cents.                                      | smma_lo_01608 |
|   |   | Find the change from one dollar for two to four items (each 10, 15, or 20 cents).  | smma_lo_01609 |
|   |   | Given the ending time and the elapsed time, find the starting time.  | smma_lo_01613 |
|   |   | Determine the number of dollar bills needed to buy three to five items.  | smma_lo_01623 |
|   |   | Estimate the difference by rounding to the nearest dollar (minuends \$5.00 to \$20.00, subtrahends \$3.00 to \$15.00).             | smma_lo_01669 |
|   |   | Read and interpret a line graph.   | smma_lo_01764 |
|   |   | R: Express yards and feet as an equivalent number of feet, or feet and inches as an equivalent number of inches.                   | smma_lo_00166 |
|   |   | R: Solve an addition problem by finding the total cost of two items (prices expressed as decimals, total < \$0.50, no regrouping). | smma_lo_00181 |
|   |   | R: Identify the fraction of a dollar a coin is worth (penny to half-dollar).   | smma_lo_00809 |
| R: Identify the most reasonable answer to a multiplication problem involving money. | smma_lo_01278   |  |               |

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| 4.MD.A.3    | Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.   | Find the area of a rectangle using a formula.   | smma_lo_00810 |
| 4.MD.B.4    | Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.   | R: Choose a title for a line plot and label the units.  | smma_lo_01643 |
| 4.MD.C.5    | Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand the following concepts of angle measurement: An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a "one-degree angle," and can be used to measure angles. An angle that turns through $n$ one-degree angles is said to have an angle measure of $n$ degrees. | R: Match the labeled angles to the correct angle notation.  | smma_lo_00617 |
| 4.MD.C.6    | Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.  | Given the measure of an angle (initial side at 0 degrees, measure 10 to 180 degrees).                                   | smma_lo_00631 |
|             |   | Use a protractor to measure an angle.   | smma_lo_00636 |
|             |   | Measure an angle using the appropriate protractor.  | smma_lo_00646 |
|             |   | Use a protractor to measure an angle in a triangle or quadrilateral; then find the sum of all the angles in the figure. | smma_lo_00650 |
|             |   | Measure complementary or supplementary angles and find the sum of the angle   | smma_lo_00661 |
|             |   | Measure angles in degrees using a protractor.   | smma_lo_00663 |
|             |   | R: Select the appropriate protractor to measure an angle.   | smma_lo_00644 |
|             |   | R: Identify the better estimate for an angle measure.   | smma_lo_00657 |

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| 4.MD.C.7   | Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure. | Use a protractor to measure an angle in a triangle or quadrilateral; then find the sum of all the angles in the figure. | smma_lo_00650 |
| 4.NBT.A.1  | Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.  | Identify the value of a given digit in a four-digit number.   | smma_lo_01062 |
| 4.NBT.A.2  | Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.   | Identify a number with a given digit in the ones, tens, hundreds, or thousands place.                                   | smma_lo_01033 |
|  |   | Identify the expanded notation of a four-digit number.  | smma_lo_01038 |
|  |   | 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 a number with a given digit in the thousands to hundred millions place.  | smma_lo_01064 |
|  |   | Enter the number for a word name (1000 to 9999).  | smma_lo_01065 |
|  |   | Enter a number in a place-value chart (10,000 to 999,999).  | smma_lo_01070 |
|  |   | Identify a number that is one or two greater than or less than a five- or six-digit number.                             | smma_lo_01072 |
|  |   | Enter each individual digit in a place-value chart for a five- to nine-digit number given the name of the number.       | smma_lo_01075 |
| Identify the number when given the word name (10,000 to 999,999).                | smma_lo_01076   |   |               |
| Identify the digits in the period (hundreds, thousands, millions, and billions). | smma_lo_01083   |   |               |

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| 4.NBT.A.2   | Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$ , $=$ , and $<$ symbols to record the results of comparisons. | Express a number in expanded notation or determine the number from an expanded notation.                                | smma_lo_01097 |
|             |   | Order five numbers from least to greatest (three- to six-digit numbers).  | smma_lo_01710 |
|             |   | Compare two whole numbers (three to seven-digit numbers).   | smma_lo_01711 |
|             |   | R: Show a four-digit number with base-ten blocks.   | smma_lo_01032 |
| 4.NBT.A.3   | Use place value understanding to round multi-digit whole numbers to any place.  | Round four- to five-digit numbers in context (to the nearest thousand).   | smma_lo_01106 |
|             |   | Estimate the sum by rounding to the nearest hundred (three-digit addends).  | smma_lo_01621 |
|             |   | R: Identify the multiple of 5 that is closest to a given number.  | smma_lo_01005 |
|             |   | R: Identify the multiple of 5 that is closer to a number (25 to 94).  | smma_lo_01006 |
| 4.NBT.B.4   | Fluently add and subtract multi-digit whole numbers using the standard algorithm.   | Add two addends (student choice, three-digit addends, sums 1000 to 1899, regrouping).                                   | 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                                  | smma_lo_00096 |
|             |   | Add three addends (student choice, a two-digit and 2 three-digit addends, sums 211 to 2097, regrouping in all places).  | smma_lo_00097 |
|             |   | Add three addends (student choice, three-digit addends, sums 311 to 2997, regrouping in all places).                    | smma_lo_00098 |
|             |   | Add two addends (student choice, a three-digit and a four-digit addends, sums 1111 to 10998, regrouping in all places). | smma_lo_00099 |
|             |   | Add two addends (student choice, four-digit addends, sums 2111 to 19998, regrouping in all places).                     | smma_lo_00100 |
|             |   | Use logical reasoning to complete an addition puzzle with two three-digit addends.                                      | smma_lo_01261 |
|             |   | Subtract a three-digit number from a four-digit number (regrouping from the tens place).                                | smma_lo_01493 |
|             |   | Subtract a three-digit number from a four-digit number (regrouping from the tens and thousands places).                 | smma_lo_01494 |
|             |   | Subtract a three-digit number from a four-digit number (regrouping from the tens and                                    | smma_lo_01495 |
|             |   | Subtract a three-digit number from a four-digit number (regrouping from the tens and hundreds places).                  | smma_lo_01496 |

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| 4.NBT.B.4   | Fluently add and subtract multi-digit whole numbers using the standard algorithm.  | 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 |
| 4.NBT.B.5   | Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. | Multiply a two-digit number by a one-digit number (products $10 \times 1$ to $12 \times 4$ ).  | smma_lo_00869 |
|             |  | Multiply whole numbers (student choice, products $10 \times 2$ to $15 \times 5$ ).   | smma_lo_00870 |
|             |  | Multiply whole numbers (products $10 \times 2$ to $12 \times 12$ ).  | smma_lo_00871 |
|             |  | Multiply whole numbers (student choice, products $16 \times 2$ to $19 \times 5$ ).   | smma_lo_00872 |
|             |  | Multiply whole numbers (student choice, products $10 \times 6$ to $15 \times 9$ ).   | smma_lo_00874 |
|             |  | Multiply whole numbers (products $2 \times 12$ to $12 \times 12$ ).  | smma_lo_00875 |
|             |  | Multiply whole numbers (student choice, products $16 \times 6$ to $19 \times 9$ ).   | smma_lo_00876 |
|             |  | Multiply whole numbers (student choice, products $21 \times 2$ to $99 \times 9$ ).   | smma_lo_00880 |
|             |  | Multiply whole numbers (student choice, products $100 \times 2$ to $990 \times 9$ , multiples of 10).  | smma_lo_00882 |
|             |  | Multiply whole numbers (student choice, products $10 \times 10$ to $15 \times 90$ , multiples of 10).  | smma_lo_00884 |
|             |  | Multiply whole numbers (student choice, products $101 \times 2$ to $999 \times 9$ ).   | smma_lo_00886 |
|             |  | Multiply whole numbers (products $20 \times 20$ to $90 \times 90$ , multiples of 10).  | smma_lo_00889 |

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| 4.NBT.B.5   | Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.  | Multiply 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 |
|             |   | Estimate the product by rounding the second factor.   | smma_lo_01603 |
|             |   | 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 |
| 4.NBT.B.6   | Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. | Divide using the long division algorithm (one-digit divisor, no remainder).                                 | smma_lo_00290 |
|             |   | Divide using the long division algorithm (one-digit divisor, remainder).                                    | smma_lo_00292 |
|             |   | Divide using the long division algorithm (one-digit divisor, no remainder).                                 | smma_lo_00294 |
|             |   | Divide using the long division algorithm (one-digit divisor, remainder).                                    | smma_lo_00295 |
|             |   | Divide using the long division algorithm (three-digit dividend, one-digit divisor, no remainder).           | smma_lo_00296 |
|             |   | Divide using the long division algorithm (three-digit dividend, one-digit divisor, remainder).              | smma_lo_00297 |
|             |   | Divide using the long division algorithm (three-digit dividend, one-digit divisor, remainder).              | smma_lo_00298 |
|             |   | Divide using the long division algorithm (four-digit dividend, one-digit divisor, remainder).               | smma_lo_00300 |
|             |   | Find the quotient of b divided by a (combinations 6 x 13 to 9 x 19).  | smma_lo_00312 |
|             |   | R: Estimate the quotient to the nearest ten (three-digit dividends, one-digit divisors).                    | smma_lo_00314 |
| 4.NF.A.1    | Explain why a fraction $a/b$ is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.                      | Find the missing numerator or denominator in an equivalent fraction (simplified fractions $1/2$ to $3/4$ ). | smma_lo_00451 |
|             |   | Find the missing numerator or denominator in an equivalent fraction (simplified fractions $1/2$ to $7/8$ ). | smma_lo_00453 |
|             |   | Determine if a fraction can be simplified; simplify if possible (simplified fractions $1/2$ to $7/8$ ).     | smma_lo_00454 |
|             |   | Write a fraction in simplest form (simplified fractions $1/2$ to $7/8$ ).                                   | smma_lo_00455 |

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| 4.NF.A.1    | Explain why a fraction $a/b$ is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.  | Determine if a fraction can be simplified; simplify if possible (simplified fractions $1/2$ to $7/8$ ). | smma_lo_00456 |
|             |   | Find an equivalent fraction of a simplified fraction (simplified fractions $1/2$ to $8/9$ ).            | smma_lo_00457 |
|             |   | Find three equivalent fractions (simplified fractions $1/2$ to $8/9$ ).                                 | smma_lo_00458 |
|             |   | Identify the figures with the equivalent fractional parts shaded.                                       | smma_lo_00483 |
|             |   | Generate a table of equivalent fractions for a fraction in simplest form.                               | smma_lo_01791 |
|             |   | Generate a table of equivalent fractions for a fraction not in simplest form.                           | smma_lo_01792 |
|             |   | Identify the fraction equivalent to the given fraction.   | smma_lo_01793 |
|             |   | R: Determine the least common denominator of two fractions.   | smma_lo_00493 |
| 4.NF.A.2    | Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using a visual fraction model. | Use a model to compare two fractions (halves to eighths, unlike denominators).                          | smma_lo_00429 |
|             |   | Compare fractions to 1 on the number line (halves to eighths).  | smma_lo_00432 |
|             |   | Using models, compare fractions (unlike denominators, halves to sixteenths).                            | smma_lo_00436 |
|             |   | Identify the fraction that is greater than a given fraction (unlike denominators, halves to eighths).   | smma_lo_00437 |
|             |   | Using models, compare fractions (unlike denominators, halves to eighths).                               | smma_lo_00438 |
|             |   | Order three fractions from least to greatest (unlike denominators, halves to twelfths).                 | smma_lo_00440 |
|             |   | Compare fractions to 1 (halves to sixteenths).  | smma_lo_00448 |
|             |   | Compare fractions (unlike denominators).  | smma_lo_00462 |
|             |   | Identify the greatest or least fraction in a problem (unlike denominators).                             | smma_lo_00482 |
|             |   | Compare fractions (unlike denominators).  | smma_lo_00495 |
|             |   | Identify a list of fractions that is ordered from least to greatest.                                    | smma_lo_00497 |
| 4.NF.B.3a   | Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.   | Using models, add fractions, no simplifying (like denominators, thirds to eighths).                     | smma_lo_00441 |
|             |   | Using models, subtract fractions, no simplifying (like denominators, halves to eighths).                | smma_lo_00442 |
|             |   | Identify the difference when a fraction is subtracted from 1 (fourths to twelfths).                     | smma_lo_00445 |
|             |   | Add fractions with like denominators (no simplifying).  | smma_lo_01709 |

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| 4.NF.B.3b   | Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.<br>Examples: $3/8 = 1/8 + 1/8 + 1/8$ ; $3/8$  | Using a model, rewrite a whole number as a fraction (halves to eighths).  | smma_lo_00443 |
|             |   | Rewrite a fraction as a mixed number (halves to eighths).   | smma_lo_00449 |
|             |   | Determine addition expressions that are equivalent to a given fraction.   | smma_lo_02146 |
| 4.NF.B.3c   | Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.  | Add mixed numbers; no simplifying (like denominators, thirds to twelfths).  | smma_lo_00460 |
|             |   | Subtract mixed numbers; no simplifying (like denominators, thirds to twelfths).   | smma_lo_00461 |
|             |   | Add mixed numbers; simplify if necessary (like denominators, halves to sixteenths).   | smma_lo_00463 |
|             |   | Add mixed numbers within a context; simplify if necessary (like denominators).  | smma_lo_00480 |
|             |   | Subtract mixed numbers in context; simplify if necessary (like denominators).   | smma_lo_00481 |
|             |   | Subtract mixed numbers; simplify if necessary (like denominators).  | smma_lo_00485 |
|             |   | Add mixed numbers with like denominators in context; simplify if necessary.   | smma_lo_01624 |
|             |   | R: Using a model, rewrite a mixed number as a fraction (halves to eighths).   | smma_lo_00446 |
|             |   | R: Rewrite a mixed number as a fraction (fifths to ninths).   | smma_lo_00450 |
| 4.NF.B.3d   | Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.   | Add mixed numbers within a context; simplify if necessary (like denominators).  | smma_lo_00480 |
|             |   | Subtract mixed numbers in context; simplify if necessary (like denominators).   | smma_lo_00481 |
|             |   | Add mixed numbers with like denominators in context; simplify if necessary.   | smma_lo_01624 |
|             |   | Use a model and an equation to solve word problems involving the addition of fractions with like denominators.  | smma_lo_02004 |
|             |   | Use a model and an equation to solve word problems involving the subtraction of fractions with like denominators.   | smma_lo_02016 |
| 4.NF.B.4a   | Understand a fraction $a/b$ as a multiple of $1/b$ . For example, use a visual fraction model to represent $5/4$ as the product $5 \times (1/4)$ , recording the conclusion by the equation $5/4 = 5 \times (1/4)$ .  | Use fraction models to relate a fraction to a whole number times a unit fraction. Then, write an equation for this relationship.                          | smma_lo_02005 |
| 4.NF.B.4b   | Understand a multiple of $a/b$ as a multiple of $1/b$ , and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$ , recognizing this product as $6/5$ . (In general, $n \times (a/b) = (n \times a)/b$ .) | Use fraction models to rewrite the product of a whole number and a fraction as the product of a whole number and a unit fraction. Then, find the product. | smma_lo_02006 |

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| 4.NF.B.4c   | Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat $\frac{3}{8}$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie? | Determine the sale price of an item when the price is reduced by one-half, one-third, or one-fourth.   | smma_lo_01285 |
| 4.NF.C.5    | Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.4 For example, express $\frac{3}{10}$ as $\frac{30}{100}$ , and add $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$ .  | Express a fraction with denominator 10 as an equivalent fraction with denominator 100. Then, add that fraction to another fraction with denominator 100. | smma_lo_02007 |
| 4.NF.C.6    | Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as $\frac{62}{100}$ ; describe a length as 0.62 meters; locate 0.62 on a number line diagram.   | Match a fraction to a decimal (tenths, 0.1 to 0.9).  | smma_lo_00184 |
|             |   | Determine the fraction and decimal that represent a model (base-ten blocks, tenths,  | smma_lo_00185 |
|             |   | Enter a decimal number for a mixed number (tenths, 1.1 to 9.9).  | smma_lo_00187 |
|             |   | Find the missing decimal number on a number line (tenths, 0.1 to 0.9).   | smma_lo_00188 |
|             |   | Enter the decimal equivalent for a mixed number (hundredths, 0.10 to 9.99).  | smma_lo_00205 |
|             |   | Determine the equivalent fraction for a decimal (the denominator is a factor of 100).  | smma_lo_00259 |
|             |   | R: Mark the point on a number line that represents a decimal number (0.1 to 0.9).  | smma_lo_00186 |
| 4.NF.C.7    | Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using the number line or another visual model.   | Compare decimal numbers (0.1 to 9.9).  | smma_lo_00191 |
|             |   | Order three decimal numbers (tenths to hundredths).  | smma_lo_00218 |
|             |   | R: Compare two decimal numbers (10.01 to 99.99).   | smma_lo_00216 |
|             |   | R: Graph and interpret rainfall data in a chart.   | smma_lo_01328 |
| 4.OA.A.1    | Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.  | Translate a verbal statement of a multiplicative comparison into a multiplication equation.  | smma_lo_02008 |
|             |   | Interpret a multiplication equation by writing a comparison statement.   | smma_lo_02025 |

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| 4.OA.A.2  | Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.  | Use a model to represents a word problem involving multiplicative comparison. Then, use an equation to represent the solution to the word problem. | smma_lo_02009 |
| 4.OA.A.3  | Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. | 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 |
|   |   | 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 |
|   |   | 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 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 |
|   |   | Estimate the sum by rounding to the nearest hundred (three-digit addends).   | smma_lo_01675 |
|   |   | R: Choose a method to solve a two-step problem.  | smma_lo_01289 |
|   |   | R: Identify all the towns with temperatures below 32 degrees Fahrenheit on a weather map.  | smma_lo_01311 |
| R: Determine the number of calories in multiple servings given data in a chart. | smma_lo_01333   |  |               |

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| 4.OA.A.3   | Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.                                | R: Estimate the sum or difference in a money problem by rounding to the nearest 10 (two-digit sums and differences).        | smma_lo_01580 |
|  |  | R: Identify the most reasonable quantity for a context (order of magnitude differs).  | smma_lo_01586 |
|  |  | R: Solve a multiplication problem in context (one-, two-, and three-digit factors).   | smma_lo_01604 |
|  |  | R: Estimate the difference of 2 four-digit numbers to the nearest thousand.   | smma_lo_01614 |
| 4.OA.B.4   | Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.   | Identify the number that is divisible by a given factor (numbers 2 to 81, factors 2 to 9).                                  | smma_lo_01066 |
|  |  | Identify numbers that are multiples of a given number.  | smma_lo_01069 |
|  |  | Identify the complete set of factors for a number (2 to 25).  | smma_lo_01071 |
|  |  | Find the factors of a number and determine if the number is prime or composite (3 to 30).                                   | smma_lo_01073 |
|  |  | Identify prime and composite numbers (one- or two-digit).   | smma_lo_01105 |
|  |  | Determine three factors of a given number.  | smma_lo_01107 |
|  |  | Identify sets of prime and composite numbers.   | smma_lo_01119 |
|  |  | R: Identify which numbers are divisible by another number (divisors 2 to 10).   | smma_lo_01101 |
| 4.OA.C.5   | Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way. | Determine the output of a one-function machine, given an input and sample inputs and outputs (combinations 2 x 2 to 9 x 9). | smma_lo_00358 |
|  |  | Look for a pattern to solve a problem.  | smma_lo_01276 |
|  |  | Extend a geometric pattern.   | smma_lo_01691 |
|  |  | R: Extend a 1-2-1-2 pattern of pictures.  | smma_lo_00519 |
|  |  | R: Extend a 1-2-1-2 pattern of geometric figures.   | smma_lo_00520 |
|  |  | R: Extend a 1-1-2-2 pattern of pictures.  | smma_lo_00521 |
|  |  | R: Extend a 1-1-2-2 pattern of geometric figures.   | smma_lo_00522 |
|  |  | R: Match patterns of geometric figures.   | smma_lo_00539 |
|  |  | R: Extend a 1-2-2 pattern of pictures.  | smma_lo_00556 |
|  |  | R: Extend a 1-1-2 or 1-2-2 pattern of congruent shapes.   | smma_lo_00558 |
|  |  | R: Extend a 1-2-3 pattern of similar figures.   | smma_lo_00560 |
|  |  | R: Extend a 1-2-3 pattern of geometric figures.   | smma_lo_00585 |
| R: Identify the missing geometric figure in a 1-2-1-2 pattern. | smma_lo_00591  |   |               |

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| 4.OA.C.5    | Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.   | R: Identify the missing picture in a 1-2-3-1-2-3 pattern.   | smma_lo_00607 |
|             |  | 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 |
|             |  | R: Count by 2's, 3's, or 10's (11 to 209, not multiples of 2, 3, 10).   | smma_lo_01056 |
|             |  | R: Count by 5's, 6's, or 7's (through 70).  | smma_lo_01058 |
|             |  | R: Count by 8's or 9's (up to 90).  | smma_lo_01061 |
|             |  | R: Describe the relationship between two sets of numbers in a relation or function using multiplication, addition, or subtraction.            | smma_lo_01653 |
|             |  | R: Describe the relationship between two sets of numbers in a relation or function using subtraction (minuends 30 to 50, subtrahends 2 to 5). | smma_lo_01654 |
|             |  | R: Describe the relationship between two sets of numbers in a relation or function using multiplication (factors 2 - 5).                      | smma_lo_01655 |
| 5.G.A.1     | Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). | Identify a point on a 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 |
| 5.G.A.2     | Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.  | 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 |

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| 5.G.A.2     | Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.      | Graph a point on a coordinate grid (Quadrant I).   | smma_lo_01735 |
|             |  | Graph a set of ordered pairs from a table on a coordinate plane (Quadrant I).                                    | smma_lo_01808 |
|             |  | R: Identify a point on a grid given an ordered pair, or identify the ordered pair for a point shown on the grid. | smma_lo_01057 |
|             |  | R: Find the coordinates for a point on a grid.   | smma_lo_01077 |
|             |  | R: Create a line graph using data from a table.  | smma_lo_01697 |
|             |  | R: Create a line graph.  | smma_lo_01771 |
| 5.G.B.4     | Classify two-dimensional figures in a hierarchy based on 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 |
| 5.MD.A.1    | Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. | Add metric measurements with unlike units and express the sum in terms of the smaller unit.                      | smma_lo_00168 |
|             |  | Add metric measurements with unlike units and express the sum in terms of the larger unit.                       | smma_lo_00172 |
|             |  | Convert customary units of length (inches, feet, and yards).   | smma_lo_00791 |
|             |  | Convert customary units of capacity (cups, pints, quarts, and gallons).  | smma_lo_00796 |
|             |  | Convert between customary units of weight (ounces and pounds).   | smma_lo_00797 |
|             |  | Compare unlike customary units of weight and identify the correct statement (ounces and pounds).                 | smma_lo_00801 |
|             |  | Convert metric units of length (mm, cm, m, and km; whole numbers).   | smma_lo_00814 |
| 5.MD.C.3a   | A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.   | Identify a unit cube and what attribute it is used to measure.   | smma_lo_02041 |
| 5.MD.C.3b   | A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.  | Find the volume of a prism by packing the prism with unit cubes.   | smma_lo_02042 |
| 5.MD.C.4    | Measure volumes by counting unit cubes, using cubic cm, cubicin, cubic ft, and improvised units.   | Find the volume of a rectangular solid by counting cubes.  | smma_lo_00829 |
|             |  | Find the volume of a rectangular solid by counting cubes.  | smma_lo_00833 |

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| 5.MD.C.5a   | Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication. | Find the volume of a prism by packing the prism with unit cubes.  | smma_lo_02042 |
| 5.MD.C.5b   | Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.   | Determine the volume of a box given the height, width, and length (60 to 480  | smma_lo_00174 |
|             |   | Compute the volume of right rectangular prisms using formulas.  | smma_lo_02043 |
| 5.MD.C.5c   | Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.  | Find the volume of a three-dimensional figure by decomposing that figure into two right rectangular prisms and then adding those prisms' volumes. | smma_lo_02044 |
| 5.NBT.A.1   | Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.  | Identify the place and the value of a digit in a number; for that value, identify the number 10 times as much and the number 1/10 as much.        | smma_lo_02045 |
| 5.NBT.A.2   | Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.   | Explain patterns in the number of zeros of the product and in the placement of the decimal point when multiplying a number by powers of ten.      | smma_lo_02046 |
|             |   | R: Multiply whole numbers (multiples of 10 or 100).   | smma_lo_00911 |
| 5.NBT.A.3   | Read, write, and compare decimals to thousandths.   | R: Enter a decimal number on a number line (1.11 to 9.89).  | smma_lo_00213 |
|             |   | R: Find the missing decimal number on a number line (1.0 to 9.89).  | smma_lo_00215 |
| 5.NBT.A.3a  | Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ .   | Match the word name with the decimal number (0.10 to 9.99).   | smma_lo_00204 |
|             |   | Match a decimal number to an equivalent fraction (tenths to thousandths).   | smma_lo_00224 |
|             |   | Match a decimal number to its word name (to thousandths).   | smma_lo_00227 |
|             |   | Identify the place value of a digit in a decimal number (tenths to ten thousandths).  | smma_lo_00241 |

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| 5.NBT.A.3a   | Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ . | Enter a decimal number in a place-value chart (tenths to thousandths).                                  | smma_lo_01089 |
|  |   | R: Identify the decimal number with a 0 to 9 in the tenths or hundredths place.                         | smma_lo_00202 |
|  |   | R: Match a decimal number to a model (thousandths).   | smma_lo_00242 |
| 5.NBT.A.3b   | Compare two decimals to thousandths based on meanings of the digits in each place, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.  | Compare decimal numbers (to thousandths).   | smma_lo_00225 |
|  |   | Order three decimals from least to greatest (to thousandths).   | smma_lo_00236 |
|  |   | Identify the symbol ( $<$ or $>$ ) needed to complete the inequality.                                   | smma_lo_00254 |
|  |   | Identify a list of decimal numbers ordered from least to greatest.                                      | smma_lo_01103 |
| 5.NBT.A.4  | Use place value understanding to round decimals to any place.   | Round a decimal to the nearest tenth, hundredth, or whole number.                                       | smma_lo_00230 |
| 5.NBT.B.5  | Fluently multiply multi-digit whole numbers using the standard algorithm.   | Multiply whole numbers (products $10,000 \times 2$ to $99,999 \times 9$ ).                              | smma_lo_00900 |
|  |   | Multiply whole numbers (student choice, products $100 \times 20$ to $990 \times 90$ , multiples of 10). | smma_lo_00902 |
|  |   | Multiply whole numbers (student choice, products $21 \times 11$ to $99 \times 99$ ).                    | smma_lo_00903 |
|  |   | Multiply whole numbers (student choice, products $101 \times 20$ to $999 \times 90$ , multiples of 10). | smma_lo_00904 |
|  |   | Multiply whole numbers (student choice, products $100 \times 21$ to $990 \times 90$ , multiples of 10). | smma_lo_00905 |
|  |   | Multiply (student choice, products $1000 \times 20$ to $9999 \times 90$ , multiples of 10).             | smma_lo_00906 |
|  |   | Multiply whole numbers (student choice, products $101 \times 21$ to $999 \times 99$ ).                  | smma_lo_00907 |
|  |   | Multiply by a multiple of 10 (student choice, $10,000 \times 20$ to $99,999 \times 90$ ).               | smma_lo_00908 |
|  |   | Multiply whole numbers (student choice, products $1000 \times 21$ to $9999 \times 99$ ).                | smma_lo_00909 |
|  |   | Multiply whole numbers (student choice, $10,000 \times 21$ to $99,999 \times 99$ ).                     | smma_lo_00910 |
|  |   | Estimate the product of two numbers (factors 101 to 949).   | smma_lo_00912 |
|  |   | Multiply one- to five-digit whole numbers by powers of ten (10 to 100,000).                             | smma_lo_01078 |
|  |   | Estimate the product by rounding each factor.   | smma_lo_01622 |
| R: Estimate the product of three factors (1,000 to 350,000). | smma_lo_01099   |   |               |

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| CA Standard                         | CA Standard Text  | Item Description  | Item ID       |
|-------------------------------------|---|---|---------------|
| 5.NBT.B.6                           | Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. | Divide (combinations 2 x 20 to 5 x 90).   | smma_lo_00291 |
|                                     |   | Divide (combinations 6 x 20 to 9 x 90).   | smma_lo_00293 |
|                                     |   | Multiply multiples of 10 using mental math (20 x 20 to 90 x 90).  | smma_lo_00299 |
|                                     |   | Find the missing dividend or divisor (combinations 20 × 20 to 90 × 90).   | smma_lo_00303 |
|                                     |   | R: Choose the best estimate for a long division problem (three-digit dividends, two-digit divisors).                | smma_lo_00315 |
|                                     |   | R: Estimate the sum, difference, product or quotient to solve a problem in context (round to the nearest thousand). | smma_lo_01109 |
| 5.NBT.B.7                           | Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.  | Subtract metric length or weight measurements expressed as decimals (to tenths, difference 1.2 to 8.9, regrouping). | smma_lo_00159 |
|                                     |   | 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 |
|                                     |   | 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                                    | 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,                                | 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 x 2 to 0.9 x 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 x 2 to 0.09 x 5).                                | smma_lo_00221 |
|                                     |   | Multiply two decimals or multiply a decimal by a whole number (tenths to hundredths).                               | smma_lo_00223 |
|                                     |   | Multiply decimals displayed horizontally (0.2 x 0.6 to 0.9 x 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   |   |               |

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| CA Standard   | CA Standard Text   | Item Description   | Item ID       |
|---|--|--|---------------|
| 5.NBT.B.7   | Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. | Determine the missing factor in the multiplication number sentence (decimals, to ten-thousandths).                             | smma_lo_00240 |
|   |  | Divide decimals (0.3 x 0.3 to 0.9 x 0.09).   | smma_lo_00245 |
|   |  | Divide decimals (0 x 2 to 2 x 5).  | smma_lo_00251 |
|   |  | Multiply a whole number or a decimal by 0.1,   | 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 |
|   |  | Find the perimeter of a polygon (decimal numbers, metric units).   | smma_lo_00790 |
|   |  | Measure the amount of rainfall for the week; then complete the chart and determine the total amount of rainfall for the month. | smma_lo_01327 |
|   |  | 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 |
|   |  | R: Add two decimal numbers (tenths, sums 1.0 to 2.0, regrouping).  | smma_lo_00192 |
|   |  | R: Add two decimal numbers using mental math (sums 1.1 to 9.9, no regrouping).   | smma_lo_00193 |
|   |  | R: Subtract decimal numbers using mental math (minuends and subtrahends 0.1 to 9.9, no regrouping).                            | smma_lo_00195 |
|   |  | R: Add two decimal numbers using mental math (sums 10.1 to 99.9, no regrouping).   | smma_lo_00196 |
|   |  | R: Subtract decimal numbers using mental math (minuends and subtrahends 10.1 to 99.9, no regrouping).                          | smma_lo_00197 |
|   |  | R: Subtract decimal numbers (minuends 2.0 to 9.9, subtrahends 0.1 to 0.9, regrouping).   | smma_lo_00198 |
|   |  | R: Add decimal numbers (sums less than 10.0, regrouping).  | smma_lo_00199 |
|   |  | R: Add two decimal numbers (sums 1.0 to 98.9, regrouping).   | smma_lo_00201 |
|   |  | R: Subtract decimal numbers (minuends and subtrahends 0.1 to 99.9, with or without regrouping).                                | smma_lo_00203 |
|   |  | R: Identify the location of the decimal point of the product of two decimals (factors, tenths to hundredths).                  | smma_lo_00222 |
|   |  | R: Identify the best estimate of a sum, difference, or product.  | smma_lo_00231 |
|   |  | R: Identify the best estimate for a quotient (decimal divided by a whole number).  | smma_lo_00238 |
| R: Identify the probable error in a multiplication calculation with decimals. | smma_lo_00250  |  |               |

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| CA Standard   | CA Standard Text   | Item Description  | Item ID       |
|---|--|---|---------------|
| 5.NF.A.1  | Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.  | Subtract a fraction from 1; simplify (halves to sixteenths).                                  | smma_lo_00464 |
|   |  | Add fractions; no simplifying (unlike denominators).  | smma_lo_00465 |
|   |  | Subtract fractions; no simplifying (unlike denominators).                                     | smma_lo_00466 |
|   |  | Add fractions; no simplifying (unlike denominators).  | smma_lo_00467 |
|   |  | Subtract fractions; no simplifying (unlike denominators).                                     | smma_lo_00468 |
|   |  | Add fractions; simplify if necessary (unlike denominators).                                   | smma_lo_00471 |
|   |  | Subtract fractions; simplify if necessary (unlike denominators).                              | smma_lo_00472 |
|   |  | Add fractions; simplify if necessary (unlike denominators).                                   | smma_lo_00473 |
|   |  | Subtract fractions; simplify if necessary (unlike denominators).                              | smma_lo_00474 |
|   |  | Add mixed numbers; simplify if necessary (like denominators).                                 | smma_lo_00484 |
|   |  | 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 |
|   |  | 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 |
| Add two fractional parts of whole numbers in context. | smma_lo_01640  |   |               |
| 5.NF.A.2  | Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. | Estimate the sum, product, or quotient in problems with fractions.                            | smma_lo_01095 |
|   |  | Subtract two fractions from a whole within a context.   | smma_lo_01634 |
|   |  | Use addition to find an equivalent fraction for $\frac{1}{2}$ .                               | smma_lo_01706 |
|   |  | Estimate the difference of two fractions.   | smma_lo_01707 |

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| CA Standard | CA Standard Text   | Item Description   | Item ID       |
|-------------|--|--|---------------|
| 5.NF.B.3    | Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.  | Model a division word problem that results in a rational quotient; then express the word problem with an equation.   | smma_lo_02047 |
| 5.NF.B.4a   | Interpret the product $(a/b) \times q$ as a parts of a partition of $q$ into $b$ equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$ . For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$ , and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$ . (In general, $(a/b) \times (c/d) = ac/bd$ .)  | Model multiplication of a whole number by a fraction; complete an equation to show the product; interpret a real-world context that can be modeled by this equation. | smma_lo_02048 |
|             |  | Model the multiplication of two fractions; complete an equation to show the product; interpret a real-world context that can be modeled by this equation.            | smma_lo_02054 |
| 5.NF.B.4b   | Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.  | Find the area of a rectangle with fractional side lengths in two ways: by multiplying its side lengths and by tiling it with smaller rectangles.                     | smma_lo_02049 |
| 5.NF.B.5a   | Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.   | Determine whether multiplying a number by a factor results in scaling the number up or down.   | smma_lo_02050 |
| 5.NF.B.5b   | Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying $a/b$ by 1. | Determine whether multiplying a number by a factor results in scaling the number up or down.   | smma_lo_02051 |
| 5.NF.B.6    | Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.  | Find the fractional part of a recipe (multiply a fraction and a mixed number).   | smma_lo_00835 |
|             |  | R: Multiply mixed numbers; simplify if necessary.  | smma_lo_00501 |

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|-------------|--|--|---------------|
| 5.NF.B.7a   | Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $(1/3) \div 4$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4 = 1/12$ because $(1/12) \times 4 = 1/3$ .  | Model the division of a unit fraction by a nonzero whole number, and compute the quotient.   | smma_lo_02052 |
| 5.NF.B.7b   | Interpret division of a whole number by a unit fraction, and compute such quotients.   | Divide a whole number by a fraction; simplify if necessary.  | smma_lo_01787 |
| 5.NF.B.7c   | Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $1/3$ -cup servings are in 2 cups of raisins? | Use models to solve real-world problems involving division of unit fractions by nonzero whole numbers and division of whole numbers by unit fractions. | smma_lo_02053 |
|             |  | Use models to solve real-world problems involving division of unit fractions by nonzero whole numbers.   | smma_lo_02156 |
| 5.OA.A.1    | Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.  | Evaluate an expression using the order of operations.  | smma_lo_01091 |
| 5.OA.A.2.1  | Express a whole number in the range 2–50 as a product of its prime factors. For example, find the prime factors of 24 and express 24 as $2 \times 2 \times 2 \times 3$ .   | Identify the prime factorization of a two-digit number.  | smma_lo_01093 |
|             |  | R: Using a factor tree, find the prime factors of a number (2 to 32).  | smma_lo_01087 |
| 6.EE.A.1    | Write and evaluate numerical expressions involving whole-number exponents.   | 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 |
| 6.EE.A.2a   | Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as $5 - y$ .   | Identify the expression that is a translation of the written phrase.   | smma_lo_01759 |
|             |  | 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 |

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| 6.EE.A.2b   | Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms.  | Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient). | smma_lo_02057 |
| 6.EE.A.2c   | Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).  | 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 |
| 6.EE.A.3    | Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$ ; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$ ; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$ . | Identify an equivalent expression for $a \times (b + c)$ with variables.                                      | smma_lo_00129 |
|             |  | Apply the properties of operations to generate equivalent expressions.  | smma_lo_02059 |
|             |  | R: Use the commutative and associative properties of addition to find the missing number.                     | smma_lo_01090 |
| 6.EE.A.4    | Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions $y + y + y$ and $3y$ are equivalent because they name the same number regardless of which number $y$ stands for.   | Choose all expressions that are equivalent to a given expression.   | smma_lo_02060 |
| 6.EE.B.5    | Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.  | Use substitution to determine whether a given number in a specified set makes an equation or inequality true. | smma_lo_02061 |

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|---|--|--|---------------|
| 6.EE.B.6                                    | Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. | Write an expression to represent a real-world problem, using variables to represent numbers.           | smma_lo_02062 |
| 6.EE.B.7                                    | Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which $p$ , $q$ , and $x$ are all nonnegative rational numbers.  | Solve for $a$ or $b$ in $a \times b = c$ (products $6 \times 2$ to $9 \times 12$ ).                    | 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 $b$ in $a \div b = c$ (combinations $6 \div 10$ to $9 \div 12$ ).                     | smma_lo_00361 |
|   |  | Solve for $a$ or $b$ in $a \times b = x$ (products $2 \times 10$ to $12 \times 12$ ).                  | smma_lo_00363 |
|   |  | 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 $2 \times 20$ to $12 \times 90$ , 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 $0.2 \times 0.6$ to $0.9 \times 0.9$ ).        | smma_lo_00369 |
|   |  | Solve for $a$ or $b$ in $a \div b = c$ (combinations $0.6 \times 0.6$ to $0.9 \times 0.9$ ).           | smma_lo_00370 |
|   |  | Solve for $a$ , $b$ , or $c$ in $a \times b/c = d/e$ (combinations to $12 \times 12$ ).                | 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 $0.02 \times 0.13$ to $0.09 \times 0.19$ ).    | 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 |
|   |  | Solve for $x$ in $ax = c$ in steps (products $4 \times 4$ to $9 \times 10$ ).                          | smma_lo_00380 |
|   |  | Complete the steps to solve for $a$ in $a \div b = c$ (combinations $4 \times 4$ to $9 \times 10$ ).   | 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  |  |               |

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| 6.EE.B.7    | Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which $p$ , $q$ , and $x$ are all nonnegative rational numbers.  | 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 $12 \times 12$ ).               | smma_lo_01798 |
|             |  | Solve a one-step equation (fractions, multiplication and division).                                   | smma_lo_01847 |
|             |  | Solve a one-step equations (fractions, addition and subtraction).                                     | smma_lo_01868 |
|             |  | R: Identify the one-step equation that is a translation of the written phrase within a                | smma_lo_01813 |
| 6.EE.B.8    | Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or  | 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. | smma_lo_02065 |
| 6.EE.C.9    | Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. | 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 |
|             |  | 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 |
|             |  | R: Make a table and a graph when given a rule in the form $y = ax$ or $y = x + a$ .                   | smma_lo_02139 |
| 6.G.A.1     | Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.  | R: Multiply mixed numbers to determine the area of a rectangle or triangle; simplify if necessary.    | smma_lo_00508 |

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|-------------|---|---|---------------|
| 6.G.A.2     | Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = l w h$ and $V = b h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems. | R: Identify geometric solids (prisms, pyramids, cones, or spheres).                                       | smma_lo_00667 |
| 6.G.A.4     | Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.  | Identify the set of faces for a geometric solid.  | smma_lo_00664 |
|             |   | Identify the net for a geometric solid.   | smma_lo_00675 |
|             |   | Identify the net that forms a three-dimensional solid.  | smma_lo_01772 |
|             |   | 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 |
|             |   | Complete sentences about bases, faces, edges, and vertices of geometric solids.                           | smma_lo_00652 |
|             |   | R: Classify and sort three-dimensional solids based on attributes using formal geometric language.        | smma_lo_02138 |
| 6.NS.A.1    | Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.   | 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 |
| 6.NS.B.2    | Fluently divide multi-digit numbers using the standard algorithm.   | Divide using the long division algorithm (three-digit number, two-digit divisor, remainder).              | smma_lo_00304 |
|             |   | Extend an iterative pattern.  | smma_lo_01754 |
|             |   | R: Estimate the quotient in a long division problem (three-digit dividend, two-digit divisor, remainder). | smma_lo_00301 |

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| 6.NS.B.3    | Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.   | 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 a decimal number that is either greater than or less than two decimal numbers.                      | smma_lo_01118 |
|             |  | Add the decimal numbers provided on a data table.  | smma_lo_01785 |
|             |  | Subtract the decimal numbers provided on a data table.   | smma_lo_01786 |
| 6.NS.B.4    | Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a  | Given the prime factorization of two numbers, find the common multiple.                                  | smma_lo_01108 |
|             |  | Find the greatest common factor for two to three numbers.  | smma_lo_01110 |
|             |  | Find the least common multiple of two or three numbers.  | smma_lo_01112 |
|             |  | R: Identify a common factor of two numbers (4 to 81).  | smma_lo_01088 |
| 6.NS.C.5    | Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. | Read the temperature on a thermometer to nearest degree (-10 to 10 degrees).                             | smma_lo_00804 |
|             |  | 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 |
|             |  | Use positive and negative numbers together to represent quantities having opposite directions or values. | smma_lo_02066 |
|             |  | R: Evaluate $-(a + b)$ , where $9 < a < 19$ , $1 < b < 9$ .  | smma_lo_00127 |
|             |  | R: Read a thermometer to the nearest 10 degrees (Fahrenheit).  | smma_lo_00768 |

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| 6.NS.C.6a   | Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$ , and that 0 is its own opposite.                      | Evaluate the expression $-(-a)$ , where $a$ has values 1 to 99.   | smma_lo_01518 |
| 6.NS.C.6b   | Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.        | Given two points, describe how the points are related: reflected across the x-axis, reflected across the y-axis, or reflected across both axes. | smma_lo_02108 |
| 6.NS.C.6c   | Find and position integers and other rational numbers on a horizontal or vertical number line diagram.  | Locate the missing integer on a number line (-3 to -12).  | smma_lo_00101 |
|             |   | 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 |
| 6.NS.C.7a   | Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret $-3 > -7$ as a statement that $-3$ is located to the right of $-7$ on a number line oriented from left to right. | Complete statements of order for rational numbers in real-world contexts.   | smma_lo_02110 |
|             |   | R: Compare hundredths to multiples of $\frac{1}{4}$ .   | smma_lo_00209 |
|             |   | R: Determine the least or greatest integer (-10 to 10).   | smma_lo_01102 |
| 6.NS.C.7b   | Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write $-3^{\circ}\text{C} > -7^{\circ}\text{C}$ to express the fact that $-3^{\circ}\text{C}$ is warmer than $-7^{\circ}\text{C}$ .               | Compare rational numbers in real-world contexts.  | smma_lo_02109 |
|             |   | Complete statements of order for rational numbers in real-world contexts.   | smma_lo_02110 |
| 6.NS.C.7c   | Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real world situation.  | Identify absolute value as a distance from zero on a number line.   | smma_lo_01823 |
|             |   | Evaluate the absolute value of a number.  | smma_lo_01824 |
| 6.NS.C.7d   | Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than $-30$ dollars represents a debt greater than 30 dollars.  | Compare the absolute values of positive and negative quantities in a real-world situation.  | smma_lo_02111 |

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| 6.NS.C.8    | Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.   | Graph points on a coordinate plane based on a real-world context.   | smma_lo_02112 |
|             |   | Find distances between points with the same first coordinate or the same second coordinate by using coordinates and absolute value. | smma_lo_02113 |
| 6.RP.A.1    | Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.   | Identify the ratio.   | smma_lo_01712 |
|             |   | Write a ratio in three different forms.   | smma_lo_01825 |
| 6.RP.A.2    | Understand the concept of a unit rate $a/b$ associated with a ratio $a:b$ with $b \neq 0$ , and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger." | Find the unit price of an item (products $2 \times 6$ to $25 \times 32$ ).  | smma_lo_00830 |
|             |   | Identify two unit rates for a given word problem.   | smma_lo_02114 |
| 6.RP.A.3a   | Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.   | 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 |
| 6.RP.A.3b   | Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?  | Solve time and distance problems (whole numbers).   | smma_lo_00842 |
|             |   | 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 |
| 6.RP.A.3c   | Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $30/100$ times the quantity); solve problems involving finding the whole, given a part and the percent.   | 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 |
|             |   | Determine the percent (100 total items).  | smma_lo_01713 |
|             |   | Express a fraction as a percent (denominator is 100).   | smma_lo_01714 |
|             |   | R: Identify equivalent representations of numbers.  | smma_lo_01114 |

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| 6.RP.A.3d                                    | Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.   | Convert measurement units either by making a table or by multiplying by a unit rate.   | smma_lo_02117 |
| 6.SP.A.3                                     | Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.   | R: Identify the most frequent value (mode) using a line plot.  | smma_lo_01164 |
| 6.SP.B.4                                     | Display numerical data in plots on a number line, including dot plots, histograms, and box plots.   | 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 |
|  |   | R: Identify data sets that match the data represented in a given box-and-whiskers plot.  | smma_lo_01202 |
| 6.SP.B.5c                                    | Summarize numerical data sets in relation to their context, such as by: Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. | 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 |
|  |   | 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   | smma_lo_01170 |
|  |   | Determine the range of a set of data represented in a line graph.  | smma_lo_01176 |
|  |   | Determine the range, mean, median, and   | smma_lo_01210 |
|  |   | 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 range of a set of data.  | smma_lo_01766 |
|  |   | Determine the median of a set of data.   | smma_lo_01768 |
| R: Identify the median of a data set with an | smma_lo_01169   |  |               |
| R: Solve a problem in context by finding the | smma_lo_01619   |  |               |
| 7.EE.A.1                                     | Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.  | Apply properties of operations to add two linear expressions.  | smma_lo_02149 |
| 7.EE.A.2                                     | Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.   | 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 |
|  |   | Rewrite an expression from context by factoring and combining like terms.  | smma_lo_02150 |

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| 7.EE.B.3   | Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional $\frac{1}{10}$ of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar $9\frac{3}{4}$ inches long in the center of a door that is $27\frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation. | Solve for a, b, c, or d in $a/b \times c/d = e/f$ (combinations to $12 \times 12$ ).                    | smma_lo_00372 |
|  |  | Solve for a, b, or c in $a/b \div c = d/e$ (combinations to $12 \times 12$ ).                           | smma_lo_00375 |
|  |  | Solve for a, b, c, or d in $a/b \div c/d = e/f$ .   | smma_lo_00377 |
|  |  | R: Find an equivalent mixed number for a decimal (tenths to ten thousandths).                           | smma_lo_00255 |
|  |  | R: Determine the decimal and percent that is represented by a model (base-ten blocks, hundredths).      | smma_lo_00256 |
| 7.EE.B.4a  | Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$ , where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?   | Solve for a or c in $a/b + c/b = d/b$ (sums $\frac{2}{3}$ to $\frac{11}{12}$ ).                         | smma_lo_00356 |
|  |  | Solve for a or c in $(a/b - c/b = d/b)$ (minuends $\frac{2}{3}$ to $\frac{11}{12}$ ).                   | smma_lo_00360 |
|  |  | Solve for a or c in $a/b - c/b = d/b$ (improper fractions, minuends $\frac{4}{3}$ to $\frac{35}{12}$ ). | smma_lo_00362 |
|  |  | Solve for a or c in $a/b + c/b = d/b$ (improper fractions, minuends $\frac{4}{3}$ to $\frac{35}{12}$ ). | smma_lo_00364 |
|  |  | 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 $(9 \times 9)$ ).                             | 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  |   |               |

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| 7.EE.B.4a   | Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width? | 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 |
|             |  | 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 |
|             |  | Solve a two-step equation (fractions, multiplication).  | smma_lo_01850 |
|             |  | Solve a two-step equation (decimals).   | smma_lo_01851 |
|             |  | R: Identify the two-step equation that is a translation of the written phrase within a context.                 | smma_lo_01814 |
|             |  | R: Identify the equation translated from a written phrase.  | smma_lo_01852 |
| 7.EE.B.4b   | Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.   | Write an inequality of the form $px + q > r$ or $px + q < r$ to represent a constraint in a real-world problem. | smma_lo_02083 |
|             |  | Solve an inequality of the form $px + q > r$ or $px + q < r$ ; then graph the solution on a number line.        | smma_lo_02084 |
|             |  | R: Identify the inequality translated from a written phrase.  | smma_lo_01853 |
|             |  | R: Identify the written phrase translated from an inequality.   | smma_lo_01869 |
|             |  | R: Identify the written phrase translated from an inequality.   | smma_lo_01870 |
| 7.G.A.1     | Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.  | Identify the scale factor in similar shapes to find the missing corresponding sides.                            | smma_lo_00513 |
|             |  | Determine distances from scale drawings (inches to miles, cm to km).  | smma_lo_00815 |
|             |  | Interpret scale drawings (metric and customary units of length).  | smma_lo_00846 |
| 7.G.A.3     | Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.  | Identify the cross section of a three-dimensional figure.   | smma_lo_00668 |

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| 7.G.B.4     | Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.       | Find the circumference, given the length of the diameter or the radius ( $\pi = 3.14$ ).                         | smma_lo_00828 |
|             |  | Measure the diameter of a circle, and then determine the circumference.  | smma_lo_01779 |
|             |  | Measure the radius of a circle, and then determine the circumference.  | smma_lo_01780 |
|             |  | Measure the diameter of a circle, and then determine the area.   | smma_lo_01781 |
|             |  | Measure the radius of a circle, and then determine the area.   | smma_lo_01783 |
|             |  | Determine the most accurate representation of the circumference of a circle.                                     | smma_lo_01784 |
|             |  | Given the radius, find the circumference of a circle within context.   | smma_lo_01855 |
|             |  | Given the diameter, find the circumference of a circle within context.   | smma_lo_01856 |
|             |  | R: Identify parts of a circle (center, radius, and diameter).  | smma_lo_00633 |
|             |  | R: Identify a part of a circle (center, radius, chord, or diameter).   | smma_lo_00653 |
| 7.G.B.5     | Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.                          | Establish that vertical angles are congruent.  | smma_lo_00670 |
|             |  | Find the measure of the missing angle in a diagram.  | smma_lo_00674 |
|             |  | Solve a problem involving equal angle measures.  | smma_lo_00677 |
| 7.G.B.6     | Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. | Find the area of a triangle (2 to 72 square inches).   | smma_lo_00176 |
|             |  | Use a formula to find the area of a parallelogram.   | smma_lo_00824 |
|             |  | Find the area of a triangle using a formula.   | smma_lo_00827 |
|             |  | 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 |
|             |  | Solve for a variable in the formula for volume of a rectangular prism (whole numbers and mixed numbers).         | smma_lo_01817 |
|             |  | Calculate the volume of a rectangular prism; then convert the cubic feet or cubic meters into gallons or liters. | smma_lo_01819 |
|             |  | R: Determine if the perimeter, area, or volume is needed to solve the problem.                                   | smma_lo_00826 |
| 7.NS.A.1a   | Describe situations in which opposite quantities combine to make 0.  | Describe situations that can be represented by opposite quantities.  | smma_lo_02086 |

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|-------------|---|--|---------------|
| 7.NS.A.1b   | Understand $p + q$ as the number located a distance $ q $ from $p$ , in the positive or negative direction depending on whether $q$ is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. | Find the missing one-digit addend in a number sentence (positive or negative)      | smma_lo_00102 |
|             |   | 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 |
|             |   | Evaluate $-(-a + b)$ , where $1 < a, b < 9$ .                                      | smma_lo_00128 |
|             |   | Find a missing number in an arithmetic sequence (-200 to 200, intervals 3 to 8).   | smma_lo_01115 |
|             |   | Represent addition of integers on a number line.                                   | smma_lo_02085 |
|             |   | R: Determine if the sum is positive or negative (one- and two-digit addends).      | smma_lo_00106 |
| 7.NS.A.1c   | Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$ . Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.  | Locate an integer on the number line (differences -5 to 1).                        | smma_lo_01505 |
|             |   | Subtract integers (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 |
|             |   | Subtract integers (minuends 0 to 20, subtrahends 1 to 40).                         | smma_lo_01510 |
|             |   | Subtract integers using a number line.   | smma_lo_01511 |
|             |   | 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 |
|             |   | 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 |

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| 7.NS.A.1c   | Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$ . Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.  | 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 |
|             |   | Represent subtraction of integers on a number line.  | smma_lo_02152 |
|             |   | Represent addition and subtraction of rational numbers (fractions) on a number line.                             | smma_lo_02153 |
|             |   | Represent addition and subtraction of rational numbers (decimals) on a number line.                              | smma_lo_02154 |
| 7.NS.A.1d   | Apply properties of operations as strategies to add and subtract rational numbers.  | Identify an equivalent expression of commutativity for addition of integers.                                     | smma_lo_00114 |
|             |   | 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 |
|             |   | R: Identify an equivalent expression with integers (four one-digit addends).                                     | smma_lo_00117 |
| 7.NS.A.2a   | Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts. | Identify an equivalent variable expression $-(a + b) = -a + (-b)$ .  | smma_lo_00124 |
|             |   | Identify $a \times (b - c)$ as equivalent to $(a \times b) - (a \times c)$ .                                     | smma_lo_00130 |
|             |   | 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 |
|             |   | Determine the sign of the product of four factors.   | smma_lo_00919 |
| 7.NS.A.2b   | Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If $p$ and $q$ are integers, then $-(p/q) = (-p)/q = p/(-q)$ . Interpret quotients of rational numbers by describing real-world contexts.  | Divide integers (combinations $6 \times 10$ to $-9 \times 12$ , dividend or divisor is negative).                | smma_lo_00316 |
|             |   | Divide integers (combinations $4 \times 6$ to $12 \times 12$ ).  | smma_lo_00317 |
|             |   | Divide integers (combinations $6 \times 13$ to $9 \times 19$ , all signs).                                       | smma_lo_00319 |
|             |   | 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 |

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| 7.NS.A.2c   | Apply properties of operations as strategies to multiply and divide rational numbers.   | Identify $-(a + b)$ as equivalent to $-a - b$ , where $a$ and $b$ are 1 to 9.                          | smma_lo_00118 |
|             |   | Identify $-(a - b)$ as equivalent to $-a + b$ ( $a$ and $b$ from 1 to 9).                              | smma_lo_01523 |
|             |   | Identify $-(-a - b)$ as equivalent to $a + b$ ( $a$ and $b$ from 1 to 9).                              | smma_lo_01524 |
|             |   | Identify $a \times (b - c)$ 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 |
| 7.NS.A.2d   | Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats. | Divide to convert from a fraction to a decimal equivalent.   | smma_lo_00258 |
|             |   | Express a mixed number as a decimal.   | smma_lo_00260 |
|             |   | R: Identify the division problem that can be used to rewrite a fraction as a decimal.                  | smma_lo_00257 |
| 7.NS.A.3    | Solve real-world and mathematical problems involving the four operations with rational numbers.   | 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 |
|             |   | Find the missing addend in a number sentence (missing addends -10 to 10, sums -20 to 20).              | smma_lo_00110 |
|             |   | Add three integers (sum -10 to 10).  | smma_lo_00111 |
|             |   | Add integers in an associative expression $((a + b) + c)$ , three addends -10 to 10).                  | smma_lo_00113 |
|             |   | Identify $-(a + b)$ as equivalent to $-a + (-b)$ , where $a$ and $b$ are 1 to 9.                       | smma_lo_00115 |
|             |   | Identify $-(a + b)$ as equivalent to $-a - b$ , where $a$ and $b$ are 1 to 9.                          | smma_lo_00116 |
|             |   | Add two integers (-20 to 20).  | smma_lo_00121 |
|             |   | Find the missing addend in a number sentence (sums -20 to 20).   | smma_lo_00122 |
|             |   | Find the missing addend in a number sentence (three addends, -10 to 10).                               | smma_lo_00123 |
|             |   | Find the missing dividend or divisor (combinations $2 \times 13$ to $5 \times 19$ ).                   | smma_lo_00309 |
|             |   | Finding the missing dividend or divisor (combinations $6 \times 13$ to $9 \times 19$ ).                | smma_lo_00310 |
|             |   | Find the missing dividend or divisor in a number sentence (combinations $7 \times 13$ to $9 \times$    | smma_lo_00320 |
|             |   | Solve for $a$ , $b$ , or $c$ in $a/b \div c = d/e$ (combinations to $12 \times 12$ ).                  | smma_lo_00375 |
|             |   | Solve for $a$ , $b$ , $c$ , or $d$ in $a/b \div c/d = e/f$ .   | smma_lo_00377 |
|             |   | Estimate the missing factor in a number sentence (round to the nearest ten, products 2,010 to 81,090). | smma_lo_00913 |

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| 7.NS.A.3    | Solve real-world and mathematical problems involving the four operations with rational numbers.  | Find the missing positive or negative factor in a number sentence.  | smma_lo_00918 |
|             |  | Multiply three integers (one-digit factors with absolute values 2 to 10).                                       | smma_lo_00920 |
|             |  | Find a missing number in a geometric sequence (first number 1 to 5, factors 2 to 5).                            | smma_lo_01117 |
|             |  | Find the missing subtrahend in a number sentence (minuends 0 to 10, subtrahends 2 to 11, negative differences). | smma_lo_01509 |
|             |  | Find the missing subtrahend in a number sentence (minuends -9 to 0, differences -9 to 0).                       | smma_lo_01512 |
|             |  | 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 |
|             |  | 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 |
| 7.RP.A.1    | Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.   | Identify the correct proportion for the context, and then solve.  | smma_lo_01826 |
| 7.RP.A.2a   | Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. | Form a proportion that can be used to solve for the height of an object.  | smma_lo_00660 |
|             |  | Determine the fraction needed to complete the proportion.   | smma_lo_01827 |
| 7.RP.A.2b   | Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.  | Identify the unit rate given a table, a graph, an equation, a diagram, or a word problem.                       | smma_lo_02001 |
|             |  | Identify the constant of proportionality given a table, a graph, an equation, a diagram, or a word problem.     | smma_lo_02002 |

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| 7.RP.A.2c   | Represent proportional relationships by equations. For example, if total cost $t$ is proportional to the number $n$ of items purchased at a constant price $p$ , the relationship between the total cost and the number of items can be expressed as $t = pn$ .  | 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 |
| 7.RP.A.2d   | Explain what a point $(x, y)$ on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where $r$ is the unit rate.  | Interpret the meaning of a point on the graph of a proportional relationship in terms of the situation; use this information to answer questions about the situation. | smma_lo_02089 |
| 7.RP.A.3    | Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.   | Find the total cost, given an amount and the sales tax percentage.  | smma_lo_00178 |
|             |  | Find the percent of increase.   | smma_lo_00278 |
|             |  | Identify a correct expression to solve a problem about sales tax.   | smma_lo_00845 |
|             |  | 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 |
| 7.SP.A.2    | Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.  | Make predictions based on a sample.   | smma_lo_01223 |
| 7.SP.B.4    | Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book. | Find and compare the average variation of two sets of data.   | smma_lo_01221 |

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| 7.SP.C.5  | Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. | 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 |
|   |   | 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   |  |               |

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| 7.SP.C.5    | Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.        | 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 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 |
|             |  | 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 |
|             |  | 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   |               |
| 7.SP.C.6    | Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times. | 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 |

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| 7.SP.C.7a   | Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.  | In the context of randomly selecting a card that has one of two pictures on it, compute the probability of each picture being selected from a set of cards (total of 4 to 7 cards). | smma_lo_01211 |
|             |  | In the context of randomly selecting a card that has a certain name on it, compute the probability of each name being selected from a set of cards.                                 | smma_lo_01215 |
| 7.SP.C.8    | Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.  | R: Given a graphical representation of two spinners, count all the possible outcomes for spinning each spinner once.  | smma_lo_01665 |
|             |  | R: Determine the number of arrangements that can be made from two groups with two   | smma_lo_01717 |
|             |  | R: Determine the arrangements that can be made with a group of two and a group of three items.  | smma_lo_01718 |
| 7.SP.C.8a   | Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.  | Identify the probability of two independent outcomes, and then determine the probability of the combination of the two outcomes occurring simultaneously.                           | smma_lo_01224 |
|             |  | R: Given a graphical representation of a spinner, count the number of possible outcomes and complete a list of all the outcomes.  | smma_lo_01209 |
| 7.SP.C.8b   | Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.                        | 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 |
| 8.EE.A.1    | Know and apply the properties of integer exponents to generate equivalent numerical 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 |
| 8.EE.A.2    | Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$ , where $p$ is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational. | Find the square root of a number using a calculator (numbers to 4000).  | smma_lo_01120 |
| 8.EE.A.3    | Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.   | 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 |

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| 8.EE.A.4    | Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology. | Express a number in scientific notation (exponents 1 to 6).   | smma_lo_01113 |
|             |  | Given the scientific notation, determine the standard notation of a number (the power of 10 has an exponent of 1 to 6).                       | smma_lo_01121 |
|             |  | Find the missing exponent for a number written in scientific notation (the exponent is 1 to 6).   | smma_lo_01122 |
| 8.EE.B.5    | Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.   | Graph proportional relationships and interpret the unit rate as the slope of the graph.   | smma_lo_02073 |
|             |  | Compare a proportional relationship represented as a graph to a proportional relationship represented as a table.                             | smma_lo_02074 |
| 8.EE.B.6    | Use similar triangles to explain why the slope $m$ is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at $b$ .   | 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 |
| 8.EE.C.7a   | Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$ , $a = a$ , or $a = b$ results (where $a$ and $b$ are different numbers).                                | Transform a given multi-step equation into a simpler form.  | smma_lo_02079 |
| 8.EE.C.7b   | Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.   | Generate and solve an equation with variables on both sides of the equal sign in a real-world context.  | smma_lo_02145 |
| 8.EE.C.8a   | Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.   | Identify the solution to a system of linear equations by locating the point of intersection on its graph.                                     | smma_lo_02080 |

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| 8.EE.C.8b   | Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.   | 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 |
| 8.EE.C.8c   | Solve real-world and mathematical problems leading to two linear equations in two variables.  | Model a real-world problem with a system of linear equations. Then solve it by locating the intersection point of the graphs of the two equations.                         | smma_lo_02134 |
| 8.F.A.1     | Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.  | Given a list of ordered pairs of a relation, identify two ordered pairs that show the relation is not a function.  | smma_lo_01811 |
|             |   | Given a graph of a relation, identify two ordered pairs on the graph that show the relation is not a function.   | smma_lo_01812 |
|             |   | Given a set of graphs of relations, identify which graphs represent functions.   | smma_lo_01835 |
|             |   | R: Identify the addition or subtraction rule of the function.  | smma_lo_01682 |
|             |   | R: 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 |
|             |   | R: Identify the one-step rule in the relation or function (multiplication and division).   | smma_lo_01723 |
|             |   | R: Generate a table of values given a rule.  | smma_lo_01724 |
|             |   | R: Identify an expression to describe the pattern generated by a table.  | smma_lo_01742 |
|             |   | R: Identify a two-step expression to describe the pattern generated by a table (input = 100).  | smma_lo_01752 |
|             |   | R: Identify a two-step expression to describe the pattern generated by a table (input = 1000).   | smma_lo_01753 |
|             |   | R: Complete an input/output table given a one-step rule; then plot the ordered pairs on a  | smma_lo_01757 |
|             |   | R: Complete a table of values and graph the equation of a quadratic function.  | smma_lo_01836 |
|             |   | R: Complete a table of values and graph the equation of a linear function.   | smma_lo_01837 |
| 8.F.A.2     | Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression determine which function has the greater rate of change. | 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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| 8.F.A.3     | Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.   | Identify if an equation is a linear or exponential function.   | smma_lo_01828 |
|             |  | Identify if an equation is a linear or quadratic function.   | smma_lo_01829 |
|             |  | Identify whether graphs are linear or quadratic.   | smma_lo_01831 |
|             |  | Identify whether graphs are linear or nonlinear.   | smma_lo_01832 |
|             |  | Identify if an equation is a linear or nonlinear function.   | smma_lo_01833 |
|             |  | Determine if a table values represents a linear or nonlinear function.                               | smma_lo_01834 |
|             |  | Determine if a table values represents a linear or exponential function.                             | smma_lo_01881 |
|             |  | Determine if a table values represents a linear or quadratic function.                               | smma_lo_01882 |
|             |  | Identify the function that is represented by a table of values (linear and nonlinear).               | smma_lo_01883 |
| 8.F.B.4     | Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x,y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values. | Complete an input/output table and identify the algebraic equation that describes the one-step rule. | smma_lo_01806 |
|             |  | Complete an input/output table and identify the algebraic equation that describes the two-step rule. | smma_lo_01807 |
| 8.F.B.5     | Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.  | Identify whether graphs are linear or exponential.   | smma_lo_01830 |
| 8.G.A.1     | Verify experimentally the properties of rotations, reflections, and translations   | R: Identify a figure as a slide, reflection (flip), or turn of another figure.                       | smma_lo_00599 |
|             |  | R: Identify congruent angles.  | smma_lo_00637 |
|             |  | R: Identify a set of geometric figures that show a reflection (flip).                                | smma_lo_00648 |
|             |  | R: Identify a reflection, a rotation, and a translation of a geometric figure.                       | smma_lo_00665 |
|             |  | R: Identify a transformation as a slide, flip, or a turn.  | smma_lo_01776 |
| 8.G.A.1a    | Verify experimentally the properties of rotations, reflections, and translations: Lines are taken to lines, and line segments to line segments of the same length.   | 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 |

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| 8.G.A.1b    | Verify experimentally the properties of rotations, reflections, and translations: Angles are taken to angles of the same measure.  | 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 |
| 8.G.A.1c    | Verify experimentally the properties of rotations, reflections, and translations: Parallel lines are taken to parallel lines.  | 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 |
| 8.G.A.2     | Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the  | 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 |
|             |  | R: Identify the figure that is the same size and shape as a given figure.   | smma_lo_00600 |
|             |  | R: Identify congruent figures on a geoboard.  | smma_lo_00606 |
| 8.G.A.3     | Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.   | Reflect a figure, find the coordinates of the reflected figure, and describe the effect of the reflection on the coordinates.   | smma_lo_02125 |
|             |  | Determine the algebraic expression used to find the coordinates of the image of a figure under a dilation with the origin as the center of dilation.  | smma_lo_02142 |
|             |  | R: Determine the missing coordinate of a vertex of a triangle in a transformation.  | smma_lo_01736 |
| 8.G.A.4     | Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them | Identify the polygon that is not similar to the others.   | smma_lo_00645 |
|             |  | Identify the example that is a counterexample to a statement.   | smma_lo_00649 |
|             |  | Identify similar triangles or rectangles on a geoboard.   | smma_lo_00847 |
|             |  | R: Identify similar polygons.   | smma_lo_00610 |
|             |  | R: Identify two figures as being similar, congruent, or neither.  | smma_lo_00618 |
| 8.G.A.5     | Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.   | Establish that alternate interior angles are congruent for parallel lines.  | smma_lo_00672 |
|             |  | Arrange statements to write a proof of a fact about either the angle sum or the exterior angle of a triangle.   | smma_lo_02126 |
|             |  | 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 |
|             |  | R: Count the points of intersection of two or more lines (0 to 5 intersection points).  | smma_lo_00635 |

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| 8.G.B.6     | Explain a proof of the Pythagorean Theorem and its converse.  | Explain a proof of the Pythagorean Theorem.  | smma_lo_02131 |
|             |   | Explain a proof of the converse of the Pythagorean Theorem.  | smma_lo_02132 |
| 8.G.B.7     | Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.   | Find the measurement of the hypotenuse using the Pythagorean theorem. (2D)   | smma_lo_01854 |
| 8.G.B.8     | Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.   | Given two points on a coordinate grid, draw a right triangle whose hypotenuse connects the two points. Then use the Pythagorean Theorem to find the distance between the two points. | smma_lo_02100 |
| 8.G.C.9     | Identify and apply the formulas for the volumes of cones, cylinders, and spheres and use them 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 |
| 8.NS.A.2    | Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., $\pi^2$ ). For example, by truncating the decimal expansion of $\sqrt{2}$ , show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations. | Drag rational and irrational values to their correct positions on a number line.   | smma_lo_02141 |
| 8.SP.A.1    | Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.  | Identify positive, negative, or no association for sets of actual data.  | smma_lo_01222 |
| 8.SP.A.3    | Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.  | R: Choose an approximation based on a trend line for bivariate data.   | smma_lo_02143 |

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