



## Operations and Algebraic Thinking (OA)

## A. Represent and solve problems involving addition and subtraction.

**1.OA.A.1** Add and subtract within 20 to solve contextual problems, with unknowns in all positions, involving situations of add to, take from, put together/take apart, and compare. Use objects, drawings, and equations with a symbol for the unknown number to represent the problem. NOTE: While start unknown situations may be introduced in first grade, they are not expected to be mastered until second grade. (See Table 1-Addition and Subtraction Situations)

**1.OA.A.2** Add three whole numbers whose sum is within 20 to solve contextual problems using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

## B. Understand and apply properties of operations and the relationship between addition and subtraction.

**1.OA.B.3** Apply properties of operations (additive identity, commutative, and associative) as strategies to add and subtract. (Students need not use formal terms for these properties.) (See Table 3-Properties of Operations)

**1.OA.B.4** Understand the relationship between addition and subtraction by representing subtraction as an unknown-addend problem. For example, to solve  $10 - 8 = \underline{\quad}$ , a student can use  $8 + \underline{\quad} = 10$ . (See Table 3-Properties of Operations)

## C. Add and subtract within 20.

**1.OA.C.5** Add and subtract within 20 using strategies such as counting on, counting back, making 10, related known facts, and composing/decomposing numbers with an emphasis on making ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$  or adding  $6 + 7$  by creating the known equivalent  $6 + 4 + 3 = 10 + 3 = 13$  OR  $6 + 6 + 1 = 12 + 1$ ).

**1.OA.C.6** Use mental strategies flexibly and efficiently to develop fluency in addition and subtraction within 20. By the end of grade 1, know all sums and differences up to 10.

## D. Work with addition and subtraction equations.

**1.OA.D.7** Understand the meaning of the equal sign (e.g.,  $6 = 6$ ;  $5 + 2 = 4 + 3$ ;  $7 = 8 - 1$ ). Determine if equations involving addition and subtraction are true or false.

**1.OA.D.8** Determine the unknown whole number in an addition or subtraction equation with sums/differences within 20, with the unknown in any position (e.g.,  $8 + ? = 11$ ,  $5 = ? - 3$ ,  $6 + 6 = ?$ ). (See Table 3-Properties of Operations)

## Number and Operations in Base Ten (NBT)

## A. Extend the counting sequence.

**1.NBT.A.1** Count to 120, by ones, twos, and fives starting at any multiple of that number. Count backward from 20. Read and write numbers to 120 and represent a quantity of objects with a written number.

**1.NBT.A.2** Recognize, describe, extend, and create patterns when counting by ones, twos, fives, and tens and use those patterns to predict the next number in the counting sequence up to 120 through counting or building with concrete materials. For example: 1, 3, 5, ...; 2, 4, 6, ...; 5, 10, 15, ...; etc.

## B. Understand place value.

**1.NBT.B.3** Know that the digits of a two-digit number represent groups of tens and ones (e.g., 39 can be represented as 39 ones, 2 tens and 19 ones, or 3 tens and 9 ones).

**1.NBT.B.4** Compare two two-digit numbers based on the meanings of the digits in each place and use the symbols  $>$ ,  $=$ , and  $<$  to show the relationship.

## C. Use place value understanding and properties of operations to add and subtract.

**1.NBT.C.5** Add a two-digit number to a one-digit number and a two-digit number to a multiple of ten (within 100). Use concrete models, drawings, strategies based on place value, properties of operations, and/or the relationship between addition and subtraction to explain the reasoning used.

**1.NBT.C.6** Mentally find 10 more or 10 less than a given two-digit number without having to count by ones and explain the reasoning used.

**1.NBT.C.7** Subtract multiples of 10 from any number in the range of 10-99 using concrete models, drawings, strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

## Measurement and Data (MD)

## A. Measure lengths indirectly and by iterating length units.

**1.MD.A.1** Order three objects by length. Compare the lengths of two objects indirectly by using a third object. For example, to compare indirectly the heights of Bill and Susan: if Bill is taller than mother and mother is taller than Susan, then Bill is taller than Susan.

**1.MD.A.2** Measure the length of an object using nonstandard units (paper clips, cubes, etc.) and express this length as a whole number of units.

## B. Work with time and money.

**1.MD.B.3** Recognize a clock as a measurement tool. Tell and write time in hours and half-hours using analog and digital clocks.

**1.MD.B.4** Count the value of a set of like coins less than one dollar using the ¢ symbol only.

## Measurement and Data (MD)

### C. Represent and interpret data.

**1.MD.C.5** Organize, represent, and interpret data with up to three categories using pictographs, bar graphs, and tally charts. 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

## Geometry (G)

### A. Reason about shapes/solids and their attributes.

**1.G.A.1** Distinguish between attributes that define a shape (e.g., number of sides and vertices) versus attributes that do not define the shape (e.g., color, orientation, overall size); build and draw two-dimensional shapes to possess defining attributes.

**1.G.A.2** Create a composite figure and use the composite figure to make new figures by using two-dimensional shapes (rectangles, squares, hexagons, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional solids (cubes, spheres, rectangular prisms, cones, and cylinders).

**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 partitioning into more equal shares creates smaller shares.