Alaska Mathematics

Grade 1

Adopted 2012

Standards for Mathematical Practice

1. **Make sense of problems and persevere in solving them.** MP.1
2. **Reason abstractly and quantitatively.** MP.2
3. **Construct viable arguments and critique the reasoning of others.** MP.3
4. **Model with mathematics.** MP.4
5. **Use appropriate tools strategically.** MP.5
6. **Attend to precision.** MP.6
7. **Look for and make use of structure.** MP.7
8. **Look for and express regularity in repeated reasoning.** MP.8

Counting and Cardinality

Know ordinal names and counting flexibility.

1. Skip count by 2s and 5s. 1.CC.1
2. Use ordinal numbers correctly when identifying object position (e.g., first, second, third, etc.). 1.CC.2
3. Order numbers from 1-100. Demonstrate ability in counting forward and backward. 1.CC.3

Count to tell the number of objects.

4. Count a large quantity of objects by grouping into 10s and counting by 10s and 1s to find the quantity. 1.CC.4

Compare numbers.

5. Use the symbols for greater than, less than or equal to when comparing two numbers or groups of objects. 1.CC.5
6. Estimate how many and how much in a given set to 20 and then verify estimate by counting. 1.CC.6

Operations and Alg

Represent and solve problems involving addition and subtraction.

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1. Use addition and subtraction strategies to solve word problems (using numbers up to 20), involving situations of adding to, taking from, putting together, taking apart and comparing, with unknowns in all positions, using a number line (e.g., by using objects, drawings and equations). Record and explain using equation symbols and a symbol for the unknown number to represent the problem. 1.OA.1
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). Record and explain using equation symbols and a symbol for the unknown number to represent the problem. 1.OA.2

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

3. Apply properties of operations as strategies to add and subtract. (Students need not know the name of the property.) 1.OA.3
4. Understand subtraction as an unknown-addend problem. 1.OA.4

Add and subtract using numbers up to 20.

5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). 1.OA.5
6. Add and subtract using numbers up to 20, demonstrating fluency for addition and subtraction up to 10. Use strategies such as
counting on
making ten(8 + 6 = 8 + 2 + 4 = 10 + 4 = 14)
decomposing a number leading to a ten (13 - 4 = 13 - 3 - 1 = 10 - 1 = 9)
using the relationship between addition and subtraction, such as fact families, (8 + 4 = 12 and 12 - 8 = 4) creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). 1.OA.6

Work with addition and subtraction equations.

7. Understand the meaning of the equal sign (e.g., read equal sign as "same as") and determine if equations involving addition and subtraction are true or false. 1.OA.7
8. Determine the unknown whole number in an addition or subtraction equation. 1.OA.8

Identify and continue patterns.

9. Identify, continue and label patterns (e.g., aabb, abab). Create patterns using number, shape, size, rhythm or color. 1.OA.9

Number and Operations in Base Ten

Extend the counting sequence.

1. Count to 120. In this range, read, write and order numerals and represent a number of objects with a written numeral. 1.NBT.1

Understand place value.

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2. Model and identify place value positions of two digit numbers. Include: 1.NBT.2
   a. 10 can be thought of as a bundle of ten ones, called a "ten". 1.NBT.2.A
   b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight or nine ones. 1.NBT.2.B
   c. 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). 1.NBT.2.C
3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, <. 1.NBT.3

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

4. Add using numbers up to 100 including adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10. Use:
concrete models or drawings and strategies based on place value
properties of operations and/or relationship between addition and subtraction.
Relate the strategy to a written method and explain the reasoning used. Demonstrate in adding two-digit numbers, tens and tens are added, ones and ones are added and sometimes it is necessary to compose a ten from ten ones. 1.NBT.4
5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. 1.NBT.5
6. Subtract multiples of 10 up to 100. Use:
concrete models or drawings
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. 1.NBT.6

Measurement and Data

Measure lengths indirectly and by iterating length units.

1. Measure and compare three objects using standard or non-standard units. 1.MD.1
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. 1.MD.2

Work with time and money.

3. Tell and write time in half hours using both analog and digital clocks. 1.MD.3
4. Read a calendar distinguishing yesterday, today and tomorrow. Read and write a date. 1.MD.4
5. Recognize and read money symbols including $ and ¢. 1.MD.5
6. Identify values of coins (e.g., nickel = 5 cents, quarter = 25 cents). Identify equivalent values of coins up to $1 (e.g., 5 pennies = 1 nickel, 5 nickels = 1 quarter). 1.MD.6

Represent and interpret data.

Organize, represent and interpret data with up to three categories. Ask and answer comparison and quantity questions about the data. 1.MD.7

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Geometry

Reason with shapes and their attributes.

1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes. Identify shapes that have non-defining attributes (e.g., color, orientation, overall size). Build and draw shapes given specified attributes. 1.G.1
2. Compose (put together) two-dimensional or three-dimensional shapes to create a larger, composite shape, and compose new shapes from the composite shape. 1.G.2
3. Partition circles and rectangles into two and four equal shares. Describe the shares using the words, halves, fourths, and quarters and 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 (break apart) into more equal shares creates smaller shares. 1.G.3