Alabama Mathematics

Grade 1

Adopted 2019

Student Mathematical Practices

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

Operations and Algebraic Thinking

A. Represent and solve problems involving addition and subtraction. 1.OA.A

1. Use addition and subtraction to solve word problems within 20 by using concrete objects, drawings, and equations with a symbol for the unknown number to represent the problem. 1.OA.A.1
   a. Add to with change unknown to solve word problems within 20. 1.OA.A.1.A
   b. Take from with change unknown to solve word problems within 20. 1.OA.A.1.B
   c. Put together/take apart with addend unknown to solve word problems within 20. 1.OA.A.1.C
   d. Compare quantities, with difference unknown, bigger unknown, and smaller unknown while solving word problems within 20. 1.OA.A.1.D
2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 by using concrete objects, drawings, or equations with a symbol for the unknown number to represent the problem. 1.OA.A.2

B. Understand and apply properties of operations and the relationship between addition and subtraction. 1.OA.B

3. Apply properties of operations as strategies to add and subtract. 1.OA.B.3
4. Explain subtraction as an unknown-addend problem. 1.OA.B.4

Add and subtract within 20. 1.OA.C

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5. Relate counting to addition and subtraction. 1.OA.C.5
6. Add and subtract within 20. 1.OA.C.6
   a. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by counting on. 1.OA.C.6.A
   b. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by making ten. 1.OA.C.6.B
   c. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by decomposing a number leading to a ten. 1.OA.C.6.C
   d. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by using the relationship between addition and subtraction. 1.OA.C.6.D
   e. Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by creating equivalent but easier or known sums. 1.OA.C.6.E

D. Work with addition and subtraction equations. 1.OA.D

7. Explain that the equal sign means "the same as." Determine whether equations involving addition and subtraction are true or false. 1.OA.D.7
8. Solve for the unknown whole number in various positions in an addition or subtraction equation, relating three whole numbers that would make it true. 1.OA.D.8

E. Understand simple patterns. 1.OA.E

9. Reproduce, extend, and create patterns and sequences of numbers using a variety of materials. 1.OA.E.9

Operations with Numbers: Base Ten

A. Extend the counting sequence. 1.NBT.A

10. Extend the number sequence from 0 to 120. 1.NBT.A.10
    a. Count forward and backward by ones, starting at any number less than 120. 1.NBT.A.10.A
    b. Read numerals from 0 to 120. 1.NBT.A.10.B
    c. Write numerals from 0 to 120. 1.NBT.A.10.C
    d. Represent a number of objects from 0 to 120 with a written numeral. 1.NBT.A.10.D

B. Understand place value. 1.NBT.B

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11. Explain that the two digits of a two-digit number represent amounts of tens and ones. 1.NBT.B.11

    a. Identify a bundle of ten ones as a "ten." 1.NBT.B.11.A

    b. Identify the numbers from 11 to 19 as composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. 1.NBT.B.11.B

    c. Identify the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 as one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). 1.NBT.B.11.C

12. Compare pairs of two-digit numbers based on the values of the tens and ones digits, recording the results of comparisons with the symbols >, =, and < and orally with the words "is greater than," "is equal to," and "is less than." 1.NBT.B.12

C. Use place value understanding and properties of operations to add and subtract. 1.NBT.C

13. Add within 100, using concrete models or drawings and strategies based on place value. 1.NBT.C.13

    a. Add a two-digit number and a one-digit number. 1.NBT.C.13.A

    b. Add a two-digit number and a multiple of 10. 1.NBT.C.13.B

    c. Demonstrate that in adding two-digit numbers, tens are added to tens, ones are added to ones, and sometimes it is necessary to compose a ten. 1.NBT.C.13.C

    d. Relate the strategy for adding a two-digit number and a one-digit number to a written method and explain the reasoning used. 1.NBT.C.13.D

14. Given a two-digit number, mentally find 10 more or 10 less than the number without having to count, and explain the reasoning used. 1.NBT.C.14

15. Subtract multiples of 10 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. 1.NBT.C.15

Data Analysis

A. Collect and analyze data and interpret results. 1.DA.A

16. Organize, represent, and interpret data with up to three categories. 1.DA.A.16

    a. Ask and answer questions about the total number of data points in organized data. 1.DA.A.16.A

    b. Summarize data on Venn diagrams, pictographs, and "yes-no" charts using real objects, symbolic representations, or pictorial representations. 1.DA.A.16.B

    c. Determine "how many" in each category using up to three categories of data. 1.DA.A.16.C

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    d. Determine "how many more" or "how many less" are in one category than in another using data organized into two or three categories. 1.DA.A.16.D

Measurement

A. Describe and compare measurable attributes. 1.M.A

17. Order three objects by length; compare the lengths of two objects indirectly by using a third object. 1.M.A.17
18. Determine the length of an object using non-standard units with no gaps or overlaps, expressing the length of the object with a whole number. 1.M.A.18

B. Work with time and money. 1.M.B

19. Tell and write time to the hours and half hours using analog and digital clocks. 1.M.B.19
20. Identify pennies and dimes by name and value. 1.M.B.20

Geometry

A. Reason with shapes and their attributes. 1.G.A

21. Build and draw shapes which have defining attributes. 1.G.A.21
    a. Distinguish between defining attributes and non-defining attributes. 1.G.A.21.A
22. 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. 1.G.A.22
23. Partition circles and rectangles into two and four equal shares and describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. 1.G.A.23
    a. Describe "the whole" as two of or four of the shares of circles and rectangles partitioned into two or four equal shares. 1.G.A.23.A
    b. Explain that decomposing into more equal shares creates smaller shares of circles and rectangles. 1.G.A.23.B