Alabama Mathematics

Grade 2

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. 2.OA.A

1. Use addition and subtraction within 100 to solve one- and two-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem. 2.OA.A.1

B. Add and subtract within 20. 2.OA.B

2. Fluently add and subtract within 20 using mental strategies such as counting on, making ten, decomposing a number leading to ten, using the relationship between addition and subtraction, and creating equivalent but easier or known sums. 2.OA.B.2
   a. State automatically all sums of two one-digit numbers. 2.OA.B.2.A

C. Work with equal groups of objects to gain foundations for multiplication. 2.OA.C

3. Use concrete objects to determine whether a group of up to 20 objects is even or odd. 2.OA.C.3
   a. Write an equation to express an even number as a sum of two equal addends. 2.OA.C.3.A

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4. Using concrete and pictorial representations and repeated addition, determine the total number of objects in a rectangular array with up to 5 rows and up to 5 columns. 2.OA.C.4

    a. Write an equation to express the total number of objects in a rectangular array with up to 5 rows and up to 5 columns as a sum of equal addends. 2.OA.C.4.A

D. Understand simple patterns. 2.OA.D

5. Reproduce, extend, create, and describe patterns and sequences using a variety of materials. 2.OA.D.5

Operations with Numbers: Base Ten

A. Understand place value. 2.NBT.A

6. Explain that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. 2.NBT.A.6

    a. Explain the following three-digit numbers as special cases: 100 can be thought of as a bundle of ten tens, called a "hundred," and 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). 2.NBT.A.6.A

7. Count within 1000 by ones, fives, tens, and hundreds. 2.NBT.A.7

8. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. 2.NBT.A.8

9. Compare two three-digit numbers based on the value of the hundreds, 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." 2.NBT.A.9

B. Use place value understanding and properties of operations to add and subtract. 2.NBT.B

10. Fluently add and subtract within 100, using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. 2.NBT.B.10

11. Use a variety of strategies to add up to four two-digit numbers. 2.NBT.B.11

12. 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. 2.NBT.B.12

    a. Explain 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. 2.NBT.B.12.A

13. Mentally add and subtract 10 or 100 to a given number between 100 and 900. 2.NBT.B.13

14. Explain why addition and subtraction strategies work, using place value and the properties of operations. 2.NBT.B.14

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Data Analysis

A. Collect and analyze data and interpret results. 2.DA.A

A15. Measure lengths of several objects to the nearest whole unit. 2.DA.A15

a. Create a line plot where the horizontal scale is marked off in whole-number units to show the lengths of several measured objects. 2.DA.A15.A

A16. Create a picture graph and bar graph to represent data with up to four categories. 2.DA.A16

a. Using information presented in a bar graph, solve simple "put-together," "take-apart," and "compare" problems. 2.DA.A16.A

b. Using Venn diagrams, pictographs, and "yes-no" charts, analyze data to predict an outcome. 2.DA.A16.B

Measurement

A. Measure and estimate lengths in standard units. 2.M.A

17. Measure the length of an object by selecting and using standard units of measurement shown on rulers, yardsticks, meter sticks, or measuring tapes. 2.M.A.17

18. Measure objects with two different units, and describe how the two measurements relate to each other and the size of the unit chosen. 2.M.A.18

19. Estimate lengths using the following standard units of measurement: inches, feet, centimeters, and meters. 2.M.A.19

20. Measure to determine how much longer one object is than another, expressing the length difference of the two objects using standard units of length. 2.M.A.20

B. Relate addition and subtraction to length. 2.M.B

21. Use addition and subtraction within 100 to solve word problems involving same units of length, representing the problem with drawings (such as drawings of rulers) and/or equations with a symbol for the unknown number. 2.M.B.21

22. Create a number line diagram using whole numbers and use it to represent whole-number sums and differences within 100. 2.M.B.22

C. Work with time and money. 2.M.C

23. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. 2.M.C.23

a. Express an understanding of common terms such as, but not limited to, quarter past, half past, and quarter to. 2.M.C.23.A

24. Solve problems with money. 2.M.C.24

a. Identify nickels and quarters by name and value. 2.M.C.24.A

b. Find the value of a collection of quarters, dimes, nickels, and pennies. 2.M.C.24.B

c. Solve word problems by adding and subtracting within one dollar, using the $ and ¢ symbols appropriately (not including decimal notation). 2.M.C.24.C

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Reason with shapes and their attributes. 2.G.A

25. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. 2.G.A.25

    a. Recognize and draw shapes having specified attributes. 2.G.A.25.A

26. Partition a rectangle into rows and columns of same-size squares, and count to find the total number of squares. 2.G.A.26

27. Partition circles and rectangles into two, three, or four equal shares. Describe the shares using such terms as halves, thirds, half of, or a third of, and describe the whole as two halves, three thirds, or four fourths. 2.G.A.27

    a. Explain that equal shares of identical wholes need not have the same shape. 2.G.A.27.A