West Virginia Mathematics

Grade 2

Adopted 2024

Mathematical Habits of Mind

MHM1. Make sense of problems and persevere in solving them. MHM1

MHM2. Reason abstractly and quantitatively. MHM2

MHM3. Construct viable arguments and critique the reasoning of others. MHM3

MHM4. Model with mathematics. MHM4

MHM5. Use appropriate tools strategically. MHM5

MHM6. Attend to precision. MHM6

MHM7. Look for and make use of structure. MHM7

MHM8. Look for and express regularity in repeated reasoning. MHM8

Grade 2

Operations and Algebraic Thinking

1. Represent and solve problems involving addition and subtraction. 2.OAT.1
    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). M.2.1
2. Solve problems involving addition and subtraction and identify and explain patterns in arithmetic. 2.OAT.2
    2. Fluently (efficiently, flexibly, and accurately) add and subtract within 20 using mental strategies and by end of Grade 2, know from memory all sums of two one-digit numbers by using various strategies. M.2.2
    3. Analyze a number pattern to determine the rule: add 2, add 3, add 5, or add 10. M.2.3

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3. Work with equal groups of objects to gain foundations for multiplication. 2.OAT.3

    4. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends. M.2.4

    5. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns to describe the arrays; write expressions to describe the array and equations to express the total as a sum of equal addends. M.2.5

Number and Operations in Base Ten

1. Understand place value. 2.NOBT.1

    6. Understand that the three digits of a three-digit number represent amounts of hundreds, tens and ones (e.g., 706 equals 7 hundreds, 0 tens and 6 ones). Understand the following as special cases: M.2.6

        a. 100 can be thought of as a bundle of ten tens – called a "hundred." M.2.6.A

        b. 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. M.2.6.B

    7. Count within 1000 and skip-count by 5s, 10s and 100s. M.2.7

    8. Read and write numbers to 1000 using base-ten numerals, number names and expanded form. M.2.8

    9. Compare two three-digit numbers based on meanings of the hundreds, tens and ones digits, using >, = and < symbols to record the results of comparisons. Order numbers based on place value. M.2.9

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

    10. Fluently add and subtract within 100 using strategies based on place value, properties of operations and/or the relationship between addition and subtraction. M.2.10

    11. Add up to four two-digit numbers using strategies based on place value and properties of operations. M.2.11

    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. 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. M.2.12

    13. Mentally add 10 or 100 to a given number 100-900 and mentally subtract 10 or 100 from a given number 100-900. M.2.13

    14. Explain why addition and subtraction strategies work, using place value and the properties of operations. M.2.14

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easurement and Data

1. Measure and estimate lengths in standard units. 2.MD.1

    15. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. M.2.15

    16. 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. M.2.16

    17. Estimate lengths using units of inches, feet, centimeters, and meters. M.2.17

    18. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. M.2.18

2. Relate addition and subtraction to length. 2.MD.2

    19. 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. M.2.19

    20. 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. M.2.20

3. Work with time and money. 2.MD.3

    21. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. M.2.21

    22. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately (e.g., If you have 2 dimes and 3 pennies, how many cents do you have?). M.2.22

4. Represent and interpret data. 2.MD.4

    23. 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. M.2.23

    24. 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. M.2.24

Geometry

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1. Reason with shapes and their attributes. 2.G.1

    25. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces (sizes are compared directly or visually, not compared by measuring). Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. M.2.25

    26. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. M.2.26

    27. 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., describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. M.2.27