Arkansas Mathematics Standards

Grade 3

Adopted 2023

Grade 3

Number & Place Value

Place Value

A. Understand the base ten place value system. 3.NPV.A

1. Round four-digit whole numbers to the nearest 10 or 100, using place value understanding. 3.NPV.1
2. Identify the value of thousands, hundreds, tens, and ones place in a four-digit number. 3.NPV.2
3. Read and write whole numbers up to 10,000, using base ten numerals, word form, and a variety of expanded forms. 3.NPV.3

Comparison

B. Use place value understanding to compare numbers. 3.NPV.B

4. Compare two four-digit numbers using symbols (<, =, >) based on the value of thousands, hundreds, tens, and ones in the given numbers. 3.NPV.4
5. Compare two fractions with the same numerator or denominator by reasoning about their size based on the same whole; use symbols (<, =, >) and justify the conclusion using visual fraction models, concrete objects, or words. 3.NPV.5

Fraction Foundations

C. Build a conceptual understanding of fractions. 3.NPV.C

6. Identify fractions as parts of a whole and parts of a collection or set.
Fractions include: denominators 2, 3, 4, 6, and 8 3.NPV.6
7. Partition squares, regular hexagons, and equilateral triangles into parts with equal shares, explaining the shares of each part as a unit fraction of the whole.
Fractions include: denominators 2, 3, 4, 6, and 8 3.NPV.7
8. Identify and represent a unit fraction as a number on the number line.
Fractions include: denominators 2, 3, 4, 6, and 8 3.NPV.8
9. Identify and represent a non-unit fraction as a number on the number line, including fractions greater than one.
Fractions include: denominators 2, 3, 4, 6, and 8 3.NPV.9
10. Decompose and compose a non-unit fraction a/b as the quantity formed by the sum of unit fractions.
Fractions include: denominators 2, 3, 4, 6, and 8 3.NPV.10

Equivalent Fractions

D. Develop and apply equivalent fraction understanding. 3.NPV.D

11. Use number lines and visual models to recognize and generate equivalent fractions, explaining how they are equivalent in real-world and mathematical situations.
Fractions include: denominators 2, 3, 4, 6, and 8 3.NPV.11

Computation & Algebraic Reasoning

Operations & Properties

A. Perform operations using place value understanding and properties of operations. 3.CAR.A

1. Use computational fluency to add and subtract three-digit whole numbers, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. 3.CAR.1
2. Use basic fact fluency to multiply and divide whole numbers with mastery by the end of third grade.
Knowing all products with factors up to and including 12 and the corresponding division facts from the products with factors up to and including 12.
Using strategies such as the relationship between multiplication and division (e.g., Knowing that 8·5=40, one knows 40 ÷ 5 =8) or properties of operations. 3.CAR.2
3. Apply properties of operations as strategies to multiply and divide. Properties include: Distributive, Commutative, and Associative Properties of Multiplication 3.CAR.3
4. Use strategies to multiply one-digit numbers by multiples of 10 ranging from 10-90; strategies are based on place value and properties of operations (e.g., 9·80,5·60). 3.CAR.4
5. Identify arithmetic patterns including, but not limited to, patterns in an addition or multiplication table, explaining use of properties of operations appropriate to the pattern. 3.CAR.5

Problem Solving

B. Solve real-world problems. 3.CAR.B

6. Solve real-world problems using multiplication and division within 100 involving equal groups, arrays, partitive and measurement division. 3.CAR.6
7. Solve two-step real-word situations using addition, subtraction, multiplication, and division, representing these problems using equations with a symbol standing for an unknown quantity. 3.CAR.7

Algebraic Concepts

C. Develop and apply an understanding of foundational algebraic concepts. 3.CAR.C

8. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. 3.CAR.8
9. Understand division as an unknown-factor problem. 3.CAR.9

Geometry & Measurement

Shapes

A. Analyze attributes of shapes to develop generalizations about their properties. 3.GM.A

1. Understand that quadrilaterals in different categories may share attributes; those attributes (e.g., four equivalent sides) can define a larger category (e.g., quadrilaterals) or subcategory (e.g., rhombus and square). 3.GM.1
2. Identify perpendicular and parallel lines, as well as right angles in two-dimensional shapes and real-world surroundings or objects. 3.GM.2
3. Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, identifying and/or drawing examples of quadrilaterals that do not belong to any of these subcategories. 3.GM.3

Length & Width

B. Investigate measurement using rulers. 3.GM.B

4. Measure lengths of objects to the nearest half and quarter inch, using a ruler. 3.GM.4

Area & Volume

C. Calculate the area of rectangles and liquid volume. 3.GM.C

5. Describe area as the number of unit squares that cover a plane figure without gaps and overlaps. 3.GM.5
6. Find the area of a rectangle with whole number side lengths by modeling with unit squares and multiplying the side lengths to show the results are the same. 3.GM.6
7. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems. 3.GM.7
8. Measure and estimate liquid volumes and masses of objects using standard units. 3.GM.8
9. Solve one-step real-world problems involving liquid volumes and masses of objects in the same units, using all four operations. 3.GM.9

Time

D. Tell time and solve problems about elapsed time. 3.GM.D

10. Tell and write time to the nearest minute, using analog clocks. 3.GM.10
11. Solve word problems involving addition and subtraction of time intervals in minutes. 3.GM.11

Data Analysis

Charts, Graphs, & Tables

A. Organize and analyze data. 3.DA.A

1. Represent a data set with multiple categories, using a scaled picture graph, scaled bar graph, and a line plot. 3.DA.1
2. Solve one and two-step problems, using categorical data represented with a scaled picture graph, scaled bar graph, and a line plot. 3.DA.2