Oklahoma Mathematics

Grade 3

Adopted 2022

Numbers & Operations

1. **Compare and represent whole numbers up to 100,000 with an emphasis on place value and equality.** 3.N.1
    1. Read, write, discuss, and represent whole numbers up to 100,000. Representations should include but are not limited to numerals, words, pictures, number lines, and manipulatives (e.g., 350 = 3 hundreds, 5 tens = 35 tens = 3 hundreds, 4 tens, 10 ones). 3.N.1.1
    2. Use place value to describe whole numbers between 1,000 and 100,000 in terms of ten thousands, thousands, hundreds, tens and ones, including written, standard, and expanded forms. 3.N.1.2
    3. Applying knowledge of place values, use mental strategies (no written computations) to find 100 more or 100 less than a given number, 1,000 more or 1,000 less than a given number, and 10,000 more or 10,000 less than a given number, up to a five-digit number. 3.N.1.3
    4. Use place value to compare and order whole numbers, up to 100,000, using comparative language, numbers, and symbols. 3.N.1.4
    5. Use place value understanding to round numbers to the nearest thousand, ten-thousand and hundred thousand. 3.N.1.5

2. **Solve real-world and mathematical problems using addition, subtraction, multiplication, and division.** 3.N.2
    1. Represent multiplication facts by modeling a variety of approaches (e.g., manipulatives, repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, skip counting). 3.N.2.1
    2. Demonstrate fluency with multiplication facts using factors up to 10. 3.N.2.2
    3. Use strategies and algorithms based on knowledge of place value and equality to fluently add and subtract up to five-digit numbers (answer not to exceed 100,000). 3.N.2.3
    4. Recognize when to round numbers and apply understanding to estimate sums and differences to the nearest ten thousand, thousand, hundred, and ten. 3.N.2.4
    5. Use addition and subtraction to solve problems involving whole numbers. Use various strategies, including the relationship between addition and subtraction and the context of the problem to assess the reasonableness of results. 3.N.2.5
    6. Represent division facts and divisibility by modeling a variety of approaches (e.g., repeated subtraction, equal sharing, forming equal groups) to show the relationship between multiplication and division. 3.N.2.6

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7. Apply the relationship between multiplication and division to represent and solve problems. 3.N.2.7
8. Use various strategies (e.g., base ten blocks, area models, arrays, repeated addition, algorithms) based on knowledge of place value, equality, and properties of addition and multiplication to multiply a two-digit factor by a one-digit factor. 3.N.2.8

3. Use and justify fractional representations in real-world and mathematical problems. 3.N.3

1. Read and write fractions with words and symbols using appropriate terminology (i.e., numerator and denominator). 3.N.3.1
2. Model fractions using length, set, and area for halves, thirds, fourths, sixths, and eighths. 3.N.3.2
3. Apply understanding of unit fractions and use this understanding to compose and decompose fractions related to the same whole. 3.N.3.3
4. Use models and number lines to order and compare fractions that are related to the same whole. 3.N.3.4

4. Determine the value of a set of coins and determine the value of a set of bills in monetary transactions. 3.N.4

1. Use addition and subtraction to determine the value of a collection of coins up to one dollar using the cent symbol and in monetary transactions. 3.N.4.1
2. Add and subtract a collection of bills up to twenty dollars using whole dollars in monetary transactions. 3.N.4.2

Algebraic Reasoning & Algebra

1. Describe and create representations of numerical and geometric patterns. 3.A.1

1. Create, describe, and extend patterns involving addition, subtraction, or multiplication to solve problems in a variety of contexts. 3.A.1.1
2. Describe the rule (limited to a single operation) for a pattern from an input/output table or function machine involving addition, subtraction, or multiplication. 3.A.1.2
3. Explore and develop visual representations of increasing and decreasing geometric patterns and construct the next steps. 3.A.1.3

2. Use number sentences involving multiplication and unknowns to represent and solve real-world and mathematical problems. 3.A.2

1. Use number sense with the properties of addition, subtraction, and multiplication, to find unknowns (represented by symbols) in one-step equations. Generate real-world situations to represent number sentences. 3.A.2.1
2. Identify, represent, and apply the number properties (commutative, identity, and associative properties of addition and multiplication) using models and manipulatives to solve problems. 3.A.2.2

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Geometry & Measurement

1. **Analyze and use geometric attributes to describe and create polygons and three-dimensional figures in various contexts.** 3.GM.1
    1. Sort three-dimensional shapes based on attributes. 3.GM 1.1
    2. Build a three-dimensional figure using unit cubes when shown a picture of a three-dimensional shape. 3.GM.1.2
    3. Classify angles within a polygon as acute, right, obtuse, and straight. 3.GM.1.3

2. **Understand measurable attributes of real-world and mathematical objects using various tools.** 3.GM.2
    1. Find the perimeter of a polygon, given whole number lengths of the sides, using a variety of models. 3.GM.2.1
    2. Analyze why length and width are multiplied to find the area of a rectangle by decomposing the rectangle into one unit by one unit squares and viewing these as rows and columns to determine the area. 3.GM.2.2
    3. Count cubes systematically to identify the number of cubes needed to pack the whole or half of a three-dimensional structure. 3.GM.2.3
    4. Find the area of two-dimensional figures by counting the total number of same-size unit squares that fill the shape without gaps or overlaps 3.GM.2.4
    5. Choose an appropriate measurement instrument and measure the length of objects to the nearest whole centimeter or whole meter. 3.GM.2.5
    6. Choose an appropriate measurement instrument and measure the length of objects to the nearest whole yard, whole foot, or half inch. 3.GM.2.6
    7. Use an analog thermometer to determine temperature to the nearest degree in Fahrenheit and Celsius. 3.GM.2.7

3. **Solve problems by telling time to the nearest five-minute interval.** 3.GM.3
    1. Read and write time to the nearest five-minute interval (analog and digital). 3.GM.3.1
    2. Determine the solutions to problems involving addition and subtraction of time in intervals of five minutes, up to one hour, using pictorial models, number line diagrams, or other tools. 3.GM.3.2

Data & Probability

1. **Collect, organize, and analyze data.** 3.D.1
    1. Collect and organize a data set with multiple categories using a frequency table, line plot, pictograph, or bar graph with scaled intervals. 3.D.1.1
    2. Solve one- and two-step problems using categorical data represented with a frequency table, pictograph, or bar graph with scaled intervals. 3.D.1.2