

Content Area: Math
Grade Level: 3rd Grade
Revised: March 2016

Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

Operations and Algebraic Thinking

1. Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
2. Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
 - Unit 3: Measurement, Time, and Graphs
 - Unit 5: Write Equations to Solve Word Problems
4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
 - Unit 5: Write Equations to Solve Word Problems
5. Apply properties of operations as strategies to multiply and divide.
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
6. Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

- Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
8. Solve two-step word problems using the four operations.
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
 - Unit 4: Multidigit Addition and Subtraction
 - Unit 5: Write Equations to Solve Word Problems
 9. Identify arithmetic patterns, and explain them using properties of operations.
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
 - Unit 4: Multidigit Addition and Subtraction

Number & Operations in Base Ten

1. Use place value understanding to round whole numbers to the nearest 10 or 100.
 - Unit 4: Multidigit Addition and Subtraction
 - Unit 5: Write Equations to Solve Word Problems
2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
 - Unit 3: Measurement, Time, and Graphs
 - Unit 4: Multidigit Addition and Subtraction
 - Unit 5: Write Equations to Solve Word Problems
3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10

Number & Operations - Fractions

1. Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.
 - Unit 7: Explore Fractions
2. Understand a fraction as a number on the number line; represent fractions on a number line diagram
 - Unit 7: Explore Fractions
3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size
 - Unit 7: Explore Fractions

Measurement & Data

1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
 - Unit 3: Measurement, Time, and Graphs
2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).
 - Unit 3: Measurement, Time, and Graphs
3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs.

- Unit 3: Measurement, Time, and Graphs
4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch.
 - Unit 3: Measurement, Time, and Graphs
 5. Recognize area as an attribute of plane figures and understand concepts of area measurement.
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
 - Unit 6: Polygons, Perimeter, and Area
 6. Measure areas by counting unit squares (square cm, square m, square in., square ft., and improvised units).
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 6: Polygons, Perimeter, and Area
 7. Relate area to the operations of multiplication and addition.
 - Unit 1: Multiplication and Division with 0-5, 9, and 10
 - Unit 2: Multiplication and Division with 6s, 7s, 8s, and Multiply with Multiples of 10
 - Unit 6: Polygons, Perimeter, and Area
 8. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.
 - Unit 6: Polygons, Perimeter, and Area

Geometry

1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals).
 - Unit 6: Polygons, Perimeter, and Area
2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.
 - Unit 6: Polygons, Perimeter, and Area