

Grade 3

Adopted 2021

Mathematical Practice Standards

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
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Grade 3

Algebraic Reasoning: Operations

- A. Represent and solve problems involving addition and subtraction. **3.OA.A**
 - 1. Represent and interpret multiplication of two factors as repeated addition of equal groups. **3.OA.A.1**
 - 2. Represent and interpret whole-number quotients as dividing an amount into equal sized groups. **3.OA.A.2**
 - 3. Use multiplication and division within 100 to solve problems in authentic contexts involving equal groups, arrays, and/or measurement quantities. **3.OA.A.3**
 - 4. Determine the unknown number in a multiplication or division equation relating three whole numbers by applying the understanding of the inverse relationship of multiplication and division. **3.OA.A.4**
- B. Understand properties of multiplication and the relationship between multiplication and division. **3.OA.B**
 - 5. Apply properties of operations as strategies to multiply and divide. **3.OA.B.5**
 - 6. Understand division as an unknown-factor in a multiplication problem. **3.OA.B.6**
- C. Multiply and divide within 100. **3.OA.C**
 - 7. Fluently multiply and divide within 100 using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations. **3.OA.C.7**
- D. Solve problems involving the four operations, and identify and explain patterns in arithmetic. **3.OA.D**
 - 8. Solve two-step problems in authentic contexts that use addition, subtraction, multiplication, and division in equations with a letter standing for the unknown quantity. **3.OA.D.8**
 - 9. Identify and explain arithmetic patterns using properties of operations, including patterns in the addition table or multiplication table. **3.OA.D.9**

Numeric Reasoning: Base Ten Arithmetic

- A. Use place value understanding and properties of operations to perform multi-digit arithmetic. **3.NBT.A**
 - 1. Use place value understanding to round whole numbers within 1000 to the nearest 10 or 100. **3.NBT.A.1**
 - 2. Fluently add and subtract within 1000 using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations. **3.NBT.A.2**
 - 3. Find the product of one-digit whole numbers by multiples of 10 in the range 10-90, such as 9×80 . Students use a range of strategies and algorithms based on place value and properties of operations. **3.NBT.A.3**

Numeric Reasoning: Fractions

- A. Develop understanding of fractions as numbers. **3.NF.A**
 - 1. Understand the concept of a unit fraction and explain how multiple copies of a unit fraction form a non-unit fraction. **3.NF.A.1**
 - 2. Understand a fraction as a number on the number line; Represent fractions on a number line diagram. **3.NF.A.2**
 - 3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. **3.NF.A.3**

Geometric Reasoning and Measurement

- A. Reason with shapes and their attributes. **3.GM.A**
 - 1. Understand that shapes in different categories may share attributes and that shared attributes can define a larger category. **3.GM.A.1**
 - 2. Partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole. **3.GM.A.2**
- B. Solve problems involving measurement and estimation. **3.GM.B**
 - 3. Tell, write, and measure time to the nearest minute. Solve problems in authentic contexts that involve addition and subtraction of time intervals in minutes. **3.GM.B.3**
 - 4. Measure, estimate and solve problems in authentic contexts that involve liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). **3.GM.B.4**
- C. Geometric measurement: understand concepts of area and relate area to multiplication and to addition. **3.GM.C**
 - 5. Recognize area as an attribute of plane figures and understand concepts of area measurement presented in authentic contexts by tiling and counting unit squares. **3.GM.C.5**
 - 6. Measure areas by counting standard and non-standard unit squares. **3.GM.C.6**
 - 7. Relate area to multiplication and addition. Use relevant representations to solve problems in authentic contexts. **3.GM.C.7**
- D. Geometric measurement: recognize perimeter. **3.GM.D**
 - 8. Solve problems involving authentic contexts for perimeters of polygons. **3.GM.D.8**

Data Reasoning

- A. Pose investigative questions and collect/consider data. **3.DR.A**
 - 1. Generate questions to investigate situations within the classroom, school or community. Collect or consider measurement data that can naturally answer questions by using information presented in a scaled picture and/or bar graph. **3.DR.A.1**
- B. Analyze, represent, and interpret data. **3.DR.B**
 - 2. Analyze measurement data with a scaled picture graph or a scaled bar graph to represent a data set with several categories. Interpret information presented to answer investigative questions. **3.DR.B.2**