Grade Four: Mathematic Standards

By the end of grade four, students understand large numbers and addition, subtraction, multiplication, and division of whole numbers. They describe and compare simple fractions and decimals. They understand the properties of, and the relationships between, plane geometric figures. They collect, represent, and analyze data to answer questions.

Number Sense

1.1 Read and write whole numbers in the millions.

1.2 Order and compare whole numbers and decimals to two decimal places.

1.3 Round whole numbers through the millions to the nearest ten, hundred, thousand, ten thousand, or hundred thousand.

1.4 Decide when a rounded solution is called for and explain why such a solution may be appropriate.

1.8 Use concepts of negative numbers (e.g., on a number line, in counting, in temperature, in "owing").

1.9 Identify on a number line the relative position of positive fractions, positive decimals to two places.

3.0 Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among the operations.

3.1 Demonstrate an understanding of, and the ability to use, standard algorithms for the addition and subtraction of multidigit numbers.

3.2 Demonstrate an understanding of, and the ability to use, standard algorithms for multiplying a multidigit number by a two-digit number and for dividing a multidigit number by a one-digit number; use relationships between them to simplify computations and to check results.

3.3 Solve problems involving multiplication of multidigit numbers by two-digit numbers.

3.4 Solve problems involving division of multidigit numbers by one-digit numbers.

4.2 Know that numbers such as 2, 3, 4, 7, and 11 do not have any factors except 1 and themselves and that such numbers are called prime numbers.

Algebra and Functions

1.2 Interpret and evaluate mathematical expressions that now use parentheses.

1.3 Use parentheses to indicate which operation to perform first when writing expressions containing more than two terms and different operations.

1.5 Understand that an equation such as $y = 3x + 5$ is a prescription for determining a second number when a first number is given.

2.0 Students know how to manipulate equations.

2.1 Know and understand that equals added to equals are equal.

2.2 Know and understand that equals multiplied by equals are equal.

Measurement and Geometry

2.0   Students use two-dimensional
      coordinate grids to represent points
      and graph lines and simple figures.
2.1   Draw the points corresponding to linear
      relationships on graph paper (e.g.,
      draw 10 points on the graph of the
      equation $y = 3x$ and connect them by
      using a straight line).
2.2   Understand that the length of a
      horizontal line segment equals the
      difference of the x-coordinates.
2.3   Understand that the length of a vertical
      line segment equals the difference of
      the y-coordinates.