

**Power Standards  
Math – Fourth Grade**

**STRAND A: NUMBER SENSE, CONCEPTS, AND OPERATIONS**

**Standard 1: The student understands the different ways numbers are represented and used in the real world.**

---

*MA.A.1.2.1: The student names whole numbers, combining 3-digit numeration (hundreds, tens, ones) and the use of number periods, such as ones, thousands, and millions, and associates verbal names, written word names, and standard numerals with whole numbers, commonly used fractions, decimals, and percents.*

1. reads, writes, and identifies whole numbers through millions or more.

*MA.A.1.2.2: The student understands the relative size of whole numbers, commonly used fractions, decimals, and percents.*

2. compares and orders whole numbers through millions or more, using concrete materials, number lines, drawings, and numerals.
3. compares and orders commonly used fractions and decimals to hundredths using concrete materials, drawings, and numerals.

**Standard 3: The student understands the effects of operations on numbers and the relationship among these operations, selects appropriate operations, and computes for problem solving.**

---

*MA.A.3.2.1: The student understands and explains the effects of addition, subtraction, and multiplication on whole numbers, decimals, and fractions, including mixed numbers, and the effects of division on whole numbers, including the inverse relationship of multiplication and division.*

7. predicts the relative size of solutions in the following:
  - addition, subtraction, multiplication, and division of whole numbers
  - addition and subtraction of common fractions
  - addition and subtraction of decimals to hundredths

*M.A.A.3.2.3: The student adds, subtracts, and multiplies whole numbers, decimals, and fractions, including mixed numbers, and divides whole numbers to solve real-world problems, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.*

1. Solves real-world problems involving addition, subtraction, multiplication, and division of whole numbers and addition and subtraction of decimals and fractions using appropriate method (for example, mental math, pencil and paper, and calculator).

**STRAND B: MEASUREMENT**

**Standard 1: The student measures quantities in the real world and uses the measures to solve problems.**

---

*MA.B.1.2.2: The student solves real-world problems involving length, weight, perimeter, area, capacity, volume, time, temperature, and angles.*

1. solves real-world problems involving measurement of the following:
  - length (for example, millimeter, quarter-inch, foot, yard, meter)
  - weight (for example, pounds, ounces, kilograms, grams)
  - capacity (for example, cup, milliliters)
  - temperature (Fahrenheit and Celsius)
  - angles (right and straight)
2. solves real-world problems involving perimeter, area, and volume using concrete, graphic, or pictorial models.
3. uses schedules, calendars, and elapsed time to solve real-world problems.

**Standard 4: The student selects and uses appropriate units and instruments for measurement to achieve the degree of precision and accuracy required in real-world situations.**

---

*MA.B.4.2.1: The student determines which units of measurement, such as seconds, square inches, dollars per tankful, to use with answers to real-world problems.*

1. selects an appropriate measurement unit for labeling the solution to real-world problems.

**STRAND C: GEOMETRY AND SPATIAL SENSE**

**Standard 1: The student describes, draws, identifies, and analyzes two- and three-dimensional shapes.**

---

*MA.C.1.2.1: The student, given a verbal description, draws and/or models two- and three-dimensional shapes and uses appropriate geometric vocabulary to write a description of a figure or a picture composed of geometric figures.*

1. uses appropriate geometric vocabulary to describe properties and attributes of two- and three-dimensional figures (for example, faces, edges, vertices, diameter).
2. draws and classifies two-dimensional figures having up to eight or more sides.

**Standard 2: The student visualizes and illustrate ways in which shapes can be combined subdivided and changed.**

---

*MA.C.2.2.2: The student predicts, illustrates, and verifies which figures could result from a flip, slide, or turn of a given figure.*

1. identifies and performs flips, slides, and turns given angle ( $90^\circ$ ,  $180^\circ$ ) and direction (clockwise or counterclockwise) of turn, using concrete and graphic materials (for example, pattern blocks, geoboards, grid paper).

*MA.C.3.2.2: The student identifies and plots positive ordered pairs (whole numbers) in a rectangular coordinate system (graph).*

1. knows how to identify, locate, and plot ordered pairs of whole numbers on a graph or on the first quadrant of a coordinate system.

**Standard 3: The student uses coordinate geometry to locate objects in both two and three dimensions and to describe objects algebraically.**

---

*MA.C.3.2.2: The student identifies and plots positive ordered pairs (whole numbers) in a rectangular coordinate system (graph).*

1. knows how to identify, locate, and plot ordered pairs of whole numbers on a graph or on the first quadrant of a coordinate system.

#### **STRAND D: ALGEBRAIC THINKING**

**Standard 1: Standard 1: The student describes, analyzes, and generalizes a wide variety of patterns, relations and functions.**

---

*MA.D.1.2.1: The student describes a wide variety of patterns and relationships through models, such as manipulatives, tables, graphs, rules using algebraic symbols.*

1. describes, extends, and creates numerical and geometrical patterns using a variety of models (for example, lists, tables, charts).

#### **STRAND E: DATA ANALYSIS AND PROBABILITY**

**Standard 1: The student understands and uses the tools of data analysis for managing information.**

---

*MA.E.1.2.1: The student solves problems by generating, collecting, organizing, displaying, and analyzing data using histograms, bar graphs, circle graphs, line graphs, pictographs, and charts.*

4. generates questions, collects responses, and displays data on a pictograph, circle graph, bar, double, or line graph.

*MA.E.1.2.2: The student determines range, mean, median, and mode from sets of data.*

1. identifies the mean, median, and mode from a set of data.

*MA.E.2.2.2: The student predicts the likelihood of simple events occurring.*

1. identifies and records using common fractions, the possible outcomes of simple experiments using concrete materials (for example, spinners, marbles, number cubes, coin toss).