

Grade 6
Mathematics

These are the expectations for a student by the end of Sixth Grade.

Numbers, Number Systems and Number Relationships

Solves problems involving the basic operations, using whole numbers, decimals, integers, fractions and corresponding word problems.
Compare and order whole numbers, mixed numbers, fractions and decimals.
Compare, order, and locate on a number line whole numbers, mixed numbers, fractions, decimals and integers.

Computation and Estimation

Demonstrates basic fact fluency for multiplication and division through the 12 times tables
Uses, writes and solves ratio and proportions, including scale and rate of change
Uses the order of operations to simplify problems that include exponents, square roots, exponents, integers, and whole numbers

Measurement and Estimation

Determines and compares elapsed time to the minute
Measures to the nearest 1/16 inch or millimeter
Solves area, perimeter, and circumference problems related to triangles, quadrilaterals, and circles

Mathematical Reasoning and Connections

Estimates answers to problems involving whole numbers, fractions, decimals using all operations and check reasonableness of answer
Converts fractions, decimals, and percents

Mathematical Problem Solving and Communication

Uses problem solving strategies in real world tasks and explain thinking

Statistics and Data Analysis

Collects, displays, analyzes and uses data in various types of graphs such as circle, double bar, double line, histograms, stem and leaf plots, box and whisker plots and line plots
Identifies the mean, median, mode and range of a set of data
Identifies quartiles of a set of data

Probability and Predictions

Finds the probability of simple events, expressed as a fraction in lowest terms, decimal and percent
Determines/shows all possible outcomes for an event using a tree diagram, table or grid.

Algebra and Functions

Creates, extends, completes and determines the rule for patterns displayed in various forms
Solves one-step equations using inverse operations, the properties of numbers, such as the distributive property, and real world situations
Solves one- and two-step equations using inverse operations, the properties of numbers, such as the distributive property, and real world situations

Geometry

Identifies, draws and labels the basic terms and figures of geometry
Identifies, draws, labels, classifies, compares and describes the attributes of polygons and circles
Identifies angles and draws, labels and measures angles, using a protractor, up to 1800
Identifies and draws various transformations, including reflections, rotations and translations
Identifies the quadrants, axes and origin on the coordinate plane and plots, locates and identifies points in each quadrant
Analyzes objects for tessellations, symmetry, congruence, similarity and scale
Identifies, classifies solids and finds the volume of rectangular prisms and cylinders