

6th Grade Math Essential Standards

6.NS.A.1	Apply and extend previous understanding of multiplication and division to divide fractions by fractions. Interpret and compute quotients of fractions to solve mathematical problems and problems in real-world context involving the division of fractions by fractions using visual fraction models and equations to represent the problem.
6.NS.B.3	Compute fluently with multi-digit numbers and find common factors and multiples. Fluently add, subtract, multiply, and divide multi-digit decimals using a standard algorithm for each operation.
6.NS.C.5	Apply and extend previous understanding of numbers to the system of rational numbers. Understand that positive and negative numbers are used to describe quantities having opposite directions or values. Use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
6.EE.A.2	Apply and extend previous understanding of arithmetic to algebraic expressions. Write, read, and evaluate algebraic expressions. a.) Write expressions that record operations with numbers and variables. b.) Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, and coefficient); view one or more parts of an expression as a single entity. c.) Evaluate expressions given specific values of their variables. Include expressions that arise from formulas used to solve mathematical problems and problems in real-world context. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
6.EE.B.7	Reason about and solve one-variable equation and inequalities. Solve mathematical problems and problems in a real-world context by writing and solving equations of the form $x + p = q$, $x - p = q$, $px = q$, and $x/p = q$ for cases in which p , q , and x are all non-negative rational numbers.
6.RP.A.3	Understand ratio concepts and use ratio reasoning to solve problems. Use ratio and rate reasoning to solve mathematical problems and problems in real-world context (e.g., by reasoning about data collected from measurements, tables of equivalent ratios, tape diagrams, double number line diagrams, or equations). a.) Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. b.) Solve unit rate problems, including those involving unit pricing and constant speed. c.) Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity). Solve percent problems with the unknown in all positions of the equation. d.) Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
6.G.A.1	Solve mathematical problems and problems in real-world context involving area, surface area, and volume. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing them into rectangles or decomposing them into triangles and other shapes; apply these techniques to solve mathematical problems and problems in real-world contexts.