

1st Quarter 6th Grade Math Standards

PS.1 Make sense of problems and persevere in solving them.

PS.2 Reason abstractly and quantitatively.

PS.3 Construct viable arguments and critique the reasoning of others.

PS.4 Model with mathematics.

PS.5 Use appropriate tools strategically.

PS.6 Attend to precision.

PS.7 Look for and make use of structure.

PS.8 Look for and express regularity in repeated reasoning.

6.NS.6 Identify and explain prime and composite numbers.

6.NS.7 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers from 1 to 100, with a common factor as a multiple of a sum of two whole numbers with no common factor.

6.C.2 Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.

6.C.3 Solve real-world problems with positive fractions and decimals by using one or two operations.

6.C.4 Compute quotients of positive fractions and solve real-world problems involving division of fractions by fractions. Use a visual fraction model and/or equation to represent these calculations.

6.NS.8 Interpret, model, and use ratios to show the relative sizes of two quantities. Describe how a ratio shows the relationship between two quantities. Use the following notations: a/b , a to b , $a:b$.

6.NS.9 Understand the concept of a unit rate and use terms related to rate in the context of a ratio relationship.

6.NS.10 Use reasoning involving rates and ratios to model real-world and other mathematical problems (e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations).

6.AF.10 Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.

6.AF.3 Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.

6.AF.9 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.

6.GM.1 Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.

2nd Quarter 6th Grade Math Standards

PS.1 Make sense of problems and persevere in solving them.

PS.2 Reason abstractly and quantitatively.

PS.3 Construct viable arguments and critique the reasoning of others.

PS.4 Model with mathematics.

PS.5 Use appropriate tools strategically.

PS.6 Attend to precision.

PS.7 Look for and make use of structure.

PS.8 Look for and express regularity in repeated reasoning.

6.NS.6 Identify and explain prime and composite numbers.

6.NS.7 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers from 1 to 100, with a common factor as a multiple of a sum of two whole numbers with no common factor.

6.C.2 Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.

6.C.3 Solve real-world problems with positive fractions and decimals by using one or two operations.

6.C.4 Compute quotients of positive fractions and solve real-world problems involving division of fractions by fractions. Use a visual fraction model and/or equation to represent these calculations.

6.NS.8 Interpret, model, and use ratios to show the relative sizes of two quantities. Describe how a ratio shows the relationship between two quantities. Use the following notations: a/b , a to b , $a:b$.

6.NS.9 Understand the concept of a unit rate and use terms related to rate in the context of a ratio relationship.

6.NS.10 Use reasoning involving rates and ratios to model real-world and other mathematical problems (e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations).

6.AF.10 Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.

6.AF.3 Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.

6.AF.9 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.

6.GM.1 Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.

3rd Quarter

6th Grade Math Standards

PS.1 Make sense of problems and persevere in solving them.

PS.2 Reason abstractly and quantitatively.

PS.3 Construct viable arguments and critique the reasoning of others.

PS.4 Model with mathematics.

PS.5 Use appropriate tools strategically.

PS.6 Attend to precision.

PS.7 Look for and make use of structure.

PS.8 Look for and express regularity in repeated reasoning.

6.NS.1 Understand that positive and negative numbers are used to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge). Use positive and negative numbers to represent and compare quantities in real-world contexts, explaining the meaning of 0 in each situation.

6.NS.2 Understand the integer number system. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself (e.g., $-(-3) = 3$), and that 0 is its own opposite.

6.NS.3 Compare and order rational numbers and plot them on a number line. Write, interpret, and explain statements of order for rational numbers in real-world contexts.

6.NS.4 Understand that the absolute value of a number is the distance from zero on a number line. Find the absolute value of real numbers and know that the distance between two numbers on the number line is the absolute value of their difference. Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.

6.AF.6 Write an inequality of the form $x > c$, $x \geq c$, $x < c$, or $x \leq c$, where c is a rational number, to represent a constraint or condition in a realworld or other mathematical problem. Recognize inequalities have infinitely many solutions and represent solutions on a number line diagram.

6.AF.7 Understand that signs of numbers in ordered pairs indicate the quadrant containing the point; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. Graph points with rational number coordinates on a coordinate plane.

6.AF.8 Solve real-world and other mathematical problems by graphing points with rational number coordinates on a coordinate plane. Include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.

6.GM.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate; apply these techniques to solve real-world and other mathematical problems.

4th Quarter 6th Grade Math Standards

PS.1 Make sense of problems and persevere in solving them.

PS.2 Reason abstractly and quantitatively.

PS.3 Construct viable arguments and critique the reasoning of others.

PS.4 Model with mathematics.

PS.5 Use appropriate tools strategically.

PS.6 Attend to precision.

PS.7 Look for and make use of structure.

PS.8 Look for and express regularity in repeated reasoning.

6.GM.2 Know that the sum of the interior angles of any triangle is 180° and that the sum of the interior angles of any quadrilateral is 360° . Use this information to solve real-world and mathematical problems.

6.GM.4 Find the area of complex shapes composed of polygons by composing or decomposing into simple shapes; apply this technique to solve real-world and other mathematical problems.

6.GM.5 Find the volume of a right rectangular prism with fractional edge lengths using unit cubes of the appropriate unit fraction edge lengths (e.g., using technology or concrete materials), and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths to solve real-world and other mathematical problems.

6.GM.6 Construct right rectangular prisms from nets and use the nets to compute the surface area of prisms; apply this technique to solve real-world and other mathematical problems.

6.C.2 Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.