

# Grade 6

## Ratios and Proportional Relationships

### A Understand and use ratios to solve problems. 6.RP.A

- 1 Understand a ratio as a comparison of two quantities and represent these comparisons. 6.RP.A.1
  - 3a Create tables of equivalent ratios, find missing values in the tables and plot the pairs of values on the Cartesian coordinate plane. 6.RP.A.3A
  - 3b Solve unit rate problems. 6.RP.A.3B
  - 3c Solve percent problems. 6.RP.A.3C
  - 3d Convert measurement units within and between two systems of measurement. 6.RP.A.3D
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## Number Sense and Operations

### A Apply and extend previous understandings of multiplication and division to divide fractions by fractions. 6.NS.A

- 1a Solve problems involving division of fractions by fractions. 6.NS.A.1A
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### B Compute with non-negative multi-digit numbers, and find common factors and multiples. 6.NS.B

- 4b Use the distributive property to express a sum of two whole numbers with a common factor as a multiple of a sum of two whole numbers. 6.NS.B.4B
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### C Apply and extend previous understandings of numbers to the system of rational numbers. 6.NS.C

- 6c Understand that a number and its opposite (additive inverse) are located on opposite sides of zero on the number line. 6.NS.C.6C
  - 7 Understand that the absolute value of a rational number is its distance from 0 on the number line. 6.NS.C.7
  - 8 Extend prior knowledge to generate equivalent representations of rational numbers between fractions, decimals and percentages (limited to terminating decimals and/or benchmark fractions of  $\frac{1}{3}$  and  $\frac{2}{3}$ ). 6.NS.C.8
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## Expressions, Equations and Inequalities

### A Apply and extend previous understandings of arithmetic to algebraic expressions. 6.EEI.A

- 1 Describe the difference between an expression and an equation. 6.EEI.A.1
- 2d Write and evaluate algebraic expressions. 6.EEI.A.2D
- 2e Understand the meaning of the variable in the context of the situation. 6.EEI.A.2E
- 3 Identify and generate equivalent algebraic expressions using mathematical properties. 6.EEI.A.3

### B Reason about and solve one-variable equations and inequalities. 6.EEI.B

- 5 Understand that if any solutions exist, the solution set for an equation or inequality consists of values that make the equation or inequality true. 6.EEI.B.5
- 6 Write and solve equations using variables to represent quantities, and understand the meaning of the variable in the context of the situation. 6.EEI.B.6

### C Represent and analyze quantitative relationships between dependent and independent variables. 6.EEI.C

- 9a Write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. 6.EEI.C.9A
- 9b Analyze the relationship between the dependent and independent variables using graphs, tables and equations and relate these representations to each other. 6.EEI.C.9B

## Geometry and Measurement

### A Solve problems involving area, surface area and volume. 6.GM.A

- 3a Understand signs of numbers in ordered pairs as indicating locations in quadrants of the Cartesian coordinate plane. 6.GM.A.3A
- 3b Recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. 6.GM.A.3B
- 3c Find distances between points with the same first coordinate or the same second coordinate. 6.GM.A.3C
- 3d Construct polygons in the Cartesian coordinate plane. 6.GM.A.3D

## Data, Statistics and Probability

### A Develop understanding of statistical variability. 6.DSP.A

- 2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread and overall shape. 6.DSP.A.2

### B Summarize and describe distributions. 6.DSP.B

- 5d Analyze the choice of measures of center and variability based on the shape of the data distribution and/or the context of the data. 6.DSP.B.5D