

Grade 6: Access Points

Algebraic Reasoning

Apply previous understanding of arithmetic expressions to algebraic expressions.

- 1 Write or select an algebraic expression that represents a real-world situation. [MA.6.AR.1.AP.1](#)
- 2 Write or select an inequality that represents a real-world situation. [MA.6.AR.1.AP.2](#)
- 3 Solve an expression using substitution with no more than two operations. [MA.6.AR.1.AP.3](#)
- 4 Use tools or models to combine like terms in an expression with no more than four operations. [MA.6.AR.1.AP.4](#)

Develop an understanding for solving equations and inequalities. Write and solve one-step equations in one variable.

- 1 Choose which values, from a set of five or fewer integers, make an equation or inequality true. [MA.6.AR.2.AP.1](#)
- 2 Solve real-world, one-step linear equations using addition and subtraction involving integers. [MA.6.AR.2.AP.2](#)
- 3 Solve real-world, one-step linear equations using multiplication and division involving integers. [MA.6.AR.2.AP.3](#)
- 4 Solve a one-step equation using fractions with like denominators or decimals with place value ranging from the thousand to the thousandths. [MA.6.AR.2.AP.4](#)

Understand ratio and unit rate concepts and use them to solve problems.

- 1 Given a real-world context, write and interpret ratios to show the relative sizes of two quantities using notation: a/b , a to b , or $a:b$ where $b \neq 0$ with guidance and support. [MA.6.AR.3.AP.1](#)
 - 2 Given a rate, calculate the unit rate for a ratio with different units. [MA.6.AR.3.AP.2](#)
 - 3 Given a visual representation, write or select a ratio that describes the ratio relationship between part-to-part and part-to-whole ratios. [MA.6.AR.3.AP.3](#)
 - 4 Calculate a percentage of quantity as rate per 100 using models (e.g., percent bars or 10 10 grids). [MA.6.AR.3.AP.4](#)
 - 5a Use tools, models or manipulatives to solve problems involving ratio relationships including mixtures and ratios of length. [MA.6.AR.3.AP.5A](#)
 - 5b Use tools, models or manipulatives to solve ratio, rate or unit rate problems involving conversions within the same measurement system. [MA.6.AR.3.AP.5B](#)
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Data Analysis and Probability

Develop an understanding of statistics and determine measures of center and measures of variability. Summarize statistical distributions graphically and numerically.

- 1 Identify statistical questions from a list that would generate numerical data. [MA.6.DP.1.AP.1](#)
 - 2a Use tools to identify and calculate the mean, median, mode and range represented in a set of data with no more than five elements. [MA.6.DP.1.AP.2A](#)
 - 2b Identify and explain what the mean and mode represent in a set of data with no more than five elements. [MA.6.DP.1.AP.2B](#)
 - 3 Given a box plot, identify the value of the minimum, the lower quartile, the median, the upper quartile and the maximum. [MA.6.DP.1.AP.3](#)
 - 4 Given a histogram or a line plot, describe the physical features of the graph. [MA.6.DP.1.AP.4](#)
 - 5 Create histograms to represent sets of numerical data with 10 or fewer elements. [MA.6.DP.1.AP.5](#)
 - 6 Calculate and identify changes (increase or decrease) in the median, mode or range when a data value is added or subtracted from a data set. [MA.6.DP.1.AP.6](#)
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Geometric Reasoning

Apply previous understanding of the coordinate plane to solve problems.

- 1 Plot integer ordered pairs in all four quadrants and on both axes. [MA.6.GR.1.AP.1](#)
 - 2 Count the distance between two ordered pairs with the same x-coordinate or the same y-coordinate. [MA.6.GR.1.AP.2](#)
 - 3 Given a rectangle plotted on the coordinate plane, find the perimeter or area of the rectangle. [MA.6.GR.1.AP.3](#)
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Model and solve problems involving two-dimensional figures and three-dimensional figures.

- 1 Given the formula, find the area of a triangle. [MA.6.GR.2.AP.1](#)
 - 2 Decompose quadrilaterals and composite figures into simple shapes (rectangles or triangles) to measure area. [MA.6.GR.2.AP.2](#)
 - 3 Given a real-world problem, find the volume of a rectangular prism using a visual model and the formula. [MA.6.GR.2.AP.3](#)
 - 4 Find the surface area of right rectangular prisms by adding the areas of the shapes forming the two-dimensional net. [MA.6.GR.2.AP.4](#)
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Number Sense and Operations

Extend knowledge of numbers to negative numbers and develop an understanding of absolute value.

- 1 Plot, order and compare rational numbers (positive and negative integers within 10 from 0, fractions with common denominators, decimals up to the hundredths and percentages) in the same form. [MA.6.NSO.1.AP.1](#)
- 2 Represent positive and negative numbers in the same form on a number line given a real-world situation and explain the meaning of zero within its context. [MA.6.NSO.1.AP.2](#)
- 3 Find absolute value of a rational number ranging from -30 to 30 using a number line. [MA.6.NSO.1.AP.3](#)
- 4 Use manipulatives, models or tools to compare absolute value in mathematical and real-world problems. [MA.6.NSO.1.AP.4](#)

Add, subtract, multiply and divide positive rational numbers.

- 1 Solve one-step multiplication and division problems involving positive decimals whose place value ranges from the tens to the hundredths places. [MA.6.NSO.2.AP.1](#)
- 2 Use tools to calculate the product and quotient of positive fractions by positive fractions, including mixed numbers, using the standard algorithms. [MA.6.NSO.2.AP.2](#)
- 3a Solve one-step real-world problems involving any of the four operations with positive decimals ranging from the hundreds to hundredth place value. [MA.6.NSO.2.AP.3A](#)
- 3b Solve one-step real-world problems involving any of the four operations with positive fractions and mixed numbers with like denominators. [MA.6.NSO.2.AP.3B](#)

Apply properties of operations to rewrite numbers in equivalent forms.

- 1 Use tools to find the greatest common factor and least common multiple of two whole numbers 50 or less. [MA.6.NSO.3.AP.1](#)
- 2 Use the distributive property to express a number as the sum of two whole numbers multiplied by a common factor. [MA.6.NSO.3.AP.2](#)
- 3a Identify what an exponent represents (e.g., $8^3 = 8 \times 8 \times 8$). [MA.6.NSO.3.AP.3A](#)
- 3b Solve numerical expressions involving whole-number bases and exponents (e.g., $5^2 + 3$). [MA.6.NSO.3.AP.3B](#)
- 4 Use a tool to show the prime factors of a composite whole number (e.g., $20 = 2 \times 2 \times 5$). [MA.6.NSO.3.AP.4](#)
- 5 Rewrite a positive rational number 3 or less, as a fraction, decimal or a percent. [MA.6.NSO.3.AP.5](#)

Extend understanding of operations with integers.

- 1 Use tools to add and subtract integers between -50 and 50. [MA.6.NSO.4.AP.1](#)
- 2 Use tools to multiply and divide integers between -20 and 20. [MA.6.NSO.4.AP.2](#)