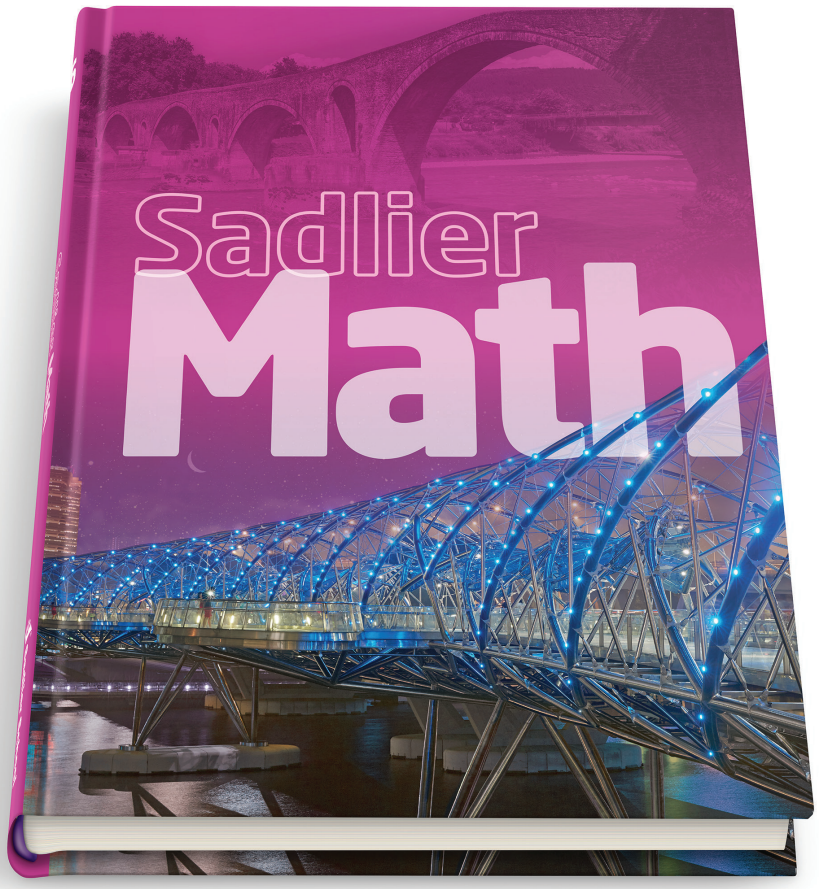
Sadlier Math™

Correlation to the Missouri Learning Standards: Grade-Level Expectations for Mathematics

Grade 6



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RATIOS AND PROPORTIONAL RELATIONSHIPS

Grade 6 Content Standards	*Sadlier Math*, Grade 6
Understand and use ratios to solve problems.	
6.RP.A.1 Understand a ratio as a comparison of two quantities and represent these comparisons.	**Chapter 10: 10-1**
6.RP.A.2 Understand the concept of a unit rate associated with a ratio, and describe the meaning of unit rate.	**Chapter 10: 10-6 through 10-9**
6.RP.A.3 Solve problems involving ratios and rates.	
6.RP.A.3a Create tables of equivalent ratios, find missing values in the tables and plot the pairs of values on the Cartesian coordinate plane.	**Chapter 10: 10-2, 10-5, 10-7, 10-9 & 10-10**
6.RP.A.3b Solve unit rate problems.	**Chapter 10: 10-6 through 10-9**
6.RP.A.3c Solve percent problems.	**Chapter 11: 11-1 through 11-10**
6.RP.A.3d Convert measurement units within and between two systems of measurement.	**Chapter 12: 12-1 through 12-4**

NUMBER SENSE AND OPERATIONS

Grade 6 Content Standards	*Sadlier Math*, Grade 6
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	
6.NS.A.1 Compute and interpret quotients of positive fractions.	
6.NS.A.1a Solve problems involving division of fractions by fractions.	**Chapter 8: 8-3 through 8-11**
Compute with non-negative multi-digit numbers, and find common factors and multiples.	
6.NS.B.2 Demonstrate fluency with division of multi-digit whole numbers.	**Chapter 3: 3-1**

NUMBER SENSE AND OPERATIONS

Grade 6 Content Standards	*Sadlier Math*, Grade 6
6.NS.B.3 Demonstrate fluency with addition, subtraction, multiplication and division of decimals.	**Chapter 1: 1-1 through 1-3** **Chapter 2: 2-1 through 2-3** **Chapter 3: 3-2 through 3-7**
6.NS.B.4 Understand a unit fraction as the quantity formed by one part when a whole is partitioned into equal parts.	
6.NS.B.4a Find the greatest common factor (GCF) and the least common multiple (LCM).	**Chapter 6: 6-2 & 6-4**
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.	**Chapter 6: 6-3**
Apply and extend previous understandings of numbers to the system of rational numbers.	
6.NS.C.5 Use positive and negative numbers to represent quantities.	**Chapter 9: 9-2**
6.NS.C.6 Locate a rational number as a point on the number line.	
6.NS.C.6a Locate rational numbers on a horizontal or vertical number line.	**Chapter 9: 9-1 through 9-3, 9-5 through 9-11**
6.NS.C.6b Write, interpret and explain problems of ordering of rational numbers.	**Chapter 9: 9-6**
6.NS.C.6c Understand that a number and its opposite (additive inverse) are located on opposite sides of zero on the number line.	**Chapter 9: 9-1, 9-5 & 9-8**
6.NS.C.7 Understand that the absolute value of a rational number is its distance from 0 on the number line.	**Chapter 9: 9-3 & 9-4**
6.NS.C.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 1/3 and 2/3).	**Chapter 11: 11-1 through 11-4**

EXPRESSIONS, EQUATIONS AND INEQUALITIES

Grade 6 Content Standards	*Sadlier Math*, Grade 6
Apply and extend previous understandings of arithmetic to algebraic expressions.	
6.EEI.A.1 Describe the difference between an expression and an equation.	**Chapter 4: 4-3 through 4-8** **Chapter 5: 5-1**
6.EEI.A.2 Create and evaluate expressions involving variables and whole number exponents.	
6.EEI.A.2a Identify parts of an expression using mathematical terminology.	**Chapter 4: 4-3**
6.EEI.A.2b Evaluate expressions at specific values of the variables.	**Chapter 4: 4-3 & 4-4**
6.EEI.A.2c Evaluate non-negative rational number expressions.	**Chapter 7: 7-5** **Chapter 8: 8-10**
6.EEI.A.2d Write and evaluate algebraic expressions.	**Chapter 1: 1-4 & 1-5** **Chapter 2: 2-4 & 2-5** **Chapter 3: 3-8 & 3-9** **Chapter 4: 4-1 through 4-9** **Chapter 7: 7-5** **Chapter 8: 8-10**
6.EEI.A.2e Understand the meaning of the variable in the context of the situation.	**Chapter 1: 1-5** **Chapter 2: 2-5** **Chapter 3: 3-9** **Chapter 4: 4-2, 4-6, 4-8 through 4-10** **Chapter 7: 7-5** **Chapter 8: 8-10**
6.EEI.A.3 Identify and generate equivalent algebraic expressions using mathematical properties.	**Chapter 4: 4-6 through 4-8**
Reason about and solve one-variable equations and inequalities.	
6.EEI.B.4 Use substitution to determine whether a given number in a specified set makes a one-variable equation or inequality true.	**Chapter 5: 5-1 & 5-6**

EXPRESSIONS, EQUATIONS AND INEQUALITIES

Grade 6 Content Standards	*Sadlier Math*, Grade 6
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.	**Chapter 4: 4-4** **Chapter 5: 5-2 through 5-4, 5-7 through 5-9**
6.EEI.B.6 Write and solve equations using variables to represent quantities, and understand the meaning of the variable in the context of the situation.	**Chapter 4: 4-4** **Chapter 5: 5-2 through 5-4, 5-7 through 5-9**
6.EEI.B.7 Solve one-step linear equations in one variable involving non-negative rational numbers.	**Chapter 5: 5-2 & 5-3** **Chapter 7: 7-6** **Chapter 8: 8-11**
6.EEI.B.8 Recognize that inequalities may have infinitely many solutions.	
6.EEI.B.8a Write an inequality of the form $x > c$, $x < c$, $x \geq c$, or $x \leq c$ to represent a constraint or condition.	**Chapter 5: 5-5 through 5-8**
6.EEI.B.8b Graph the solution set of an inequality.	**Chapter 5: 5-7**

Represent and analyze quantitative relationships between dependent and independent variables.	
6.EEI.C.9 Identify and describe relationships between two variables that change in relationship to one another.	
6.EEI.C.9a Write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable.	**Chapter 13: 13-1 through 13-5**
6.EEI.C.9b Analyze the relationship between the dependent and independent variables using graphs, tables and equations and relate these representations to each other.	**Chapter 13: 13-2 through 13-5**

GEOMETRY AND MEASUREMENT

Grade 6 Content Standards	*Sadlier Math*, Grade 6
Solve problems involving area, surface area and volume.	
6.GM.A.1 Find the area of polygons by composing or decomposing the shapes into rectangles or triangles.	**Chapter 14: 14-1 through 14-3, 14-5 & 14-6**
6.GM.A.2 Find the volume of right rectangular prisms.	
6.GM.A.2a Understand that the volume of a right rectangular prism can be found by filling the prism with multiple layers of the base.	**Chapter 15: 15-4**
6.GM.A.2b Apply $V = l * w * h$ and $V = Bh$ to find the volume of right rectangular prisms.	**Chapter 15: 15-5**
6.GM.A.3 Solve problems by graphing points in all four quadrants of the Cartesian coordinate plane.	
6.GM.A.3a Understand signs of numbers in ordered pairs as indicating locations in quadrants of the Cartesian coordinate plane.	**Chapter 9: 9-1**
6.GM.A.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.	**Chapter 9: 9-8**
6.GM.A.3c Find distances between points with the same first coordinate or the same second coordinate.	**Chapter 9: 9-9**
6.GM.A.3d Construct polygons in the Cartesian coordinate plane.	**Chapter 9: 9-10**
6.GM.A.4 Solve problems using nets.	
6.GM.A.4a Represent three-dimensional figures using nets made up of rectangles and triangles.	**Chapter 15: 15-1**
6.GM.A.4b Use nets to find the surface area of three-dimensional figures whose sides are made up of rectangles and triangles.	**Chapter 15: 15-2 & 15-3**

DATA, STATISTICS AND PROBABILITY

Grade 6 Content Standards	*Sadlier Math*, Grade 6
Develop understanding of statistical variability.	
6.DS.A.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	**Chapter 16: 16-1**
6.DS.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.	**Chapter 16: 16-2 through 16-5** **Chapter 17: 17-2 & 17-4**
6.DS.A.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary from a single number.	**Chapter 16: 16-2 through 16-4**
Summarize and describe distributions.	
6.DS.B.4 Display and interpret data.	
6.DS.B.4a Use dot plots, histograms and box plots to display and interpret numerical data.	**Chapter 17: 17-1 through 17-3, 17-6**
6.DS.B.4b Create and interpret circle graphs.	**Chapter 17: 17-5**
6.DS.B.5 Summarize numerical data sets in relation to the context.	
6.DS.B.5a Report the number of observations.	**Chapter 16: 16-2 through 16-5** **Chapter 17: 17-1 through 17-4**
6.DS.B.5b Describe the nature of the attribute under investigation, including how it was measured and its units of measurement.	**Chapter 16: 16-2 through 16-5** **Chapter 17: 17-1 through 17-4**

DATA, STATISTICS AND PROBABILITY

Grade 6 Content Standards	*Sadlier Math*, Grade 6
6.DS.B.5c Give quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context of the data.	**Chapter 16: 16-2 through 16-6** **Chapter 17: 17-1 through 17-4**
6.DS.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.	**Chapter 16: 16-2 through 16-5** **Chapter 17: 17-1 through 17-4**