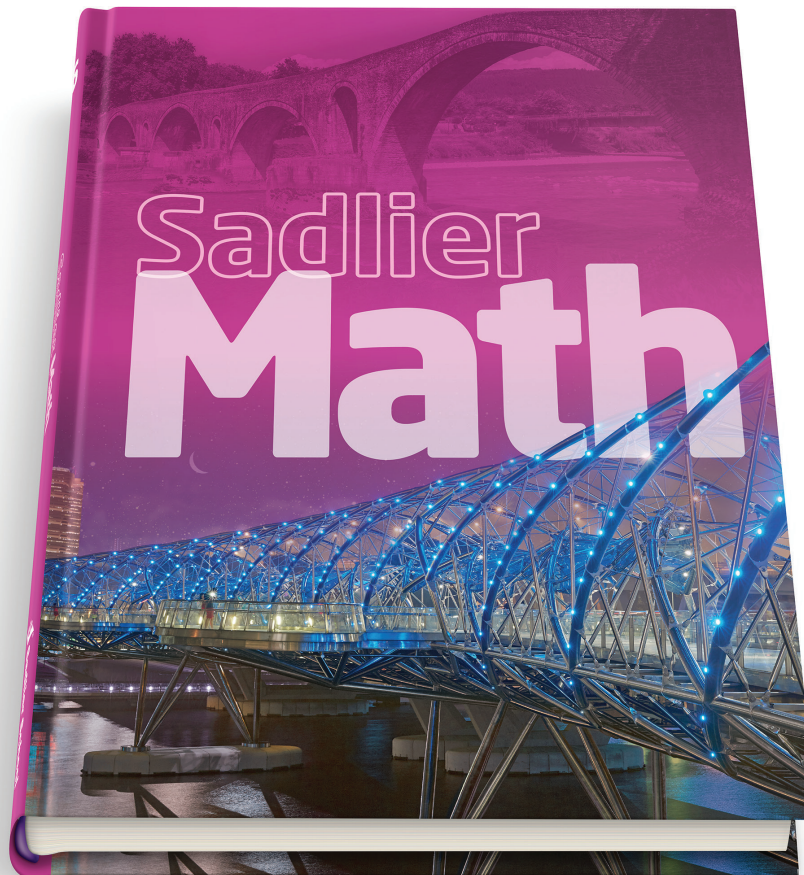


Sadlier Math[™]

Correlation to the Diocese of Richmond Mathematics Curriculum

Grade 6



Learn more at www.SadlierSchool.com/SadlierMath

I. NUMBERS AND OPERATIONS

6th Grade Content Standards

Sadlier Math, Grade 6

A. Number Sense

The student will:

- | | |
|---|--|
| 1. Define and demonstrate exponential notation | Chapter 4: 4-1
• 4-1 Exponents—pp. 70-71 |
| 2. Write large and small numbers using scientific notation | N/A |
| 3. Read, write and plot real numbers on a number line, including solved inequalities | Chapter 5: 5-5 & 5-6
• 5-5 Inequalities—pp. 108-109
• 5-6 Solutions of Inequalities—pp. 110-111
Chapter 9: 9-1, 9-3 through 9-6
• 9-1 Integers on the Number Line—pp. 196-197
• 9-3 Compare and Order Integers—pp. 200-201
• 9-4 Absolute Value as Magnitude—pp. 202-203
• 9-5 Rational Numbers—pp. 204-205
• 9-6 Compare and Order Rational Numbers—pp. 206-207 |
| 4. Demonstrate an understanding of the relationship between the absolute value of a rational number and distance on a number line. Use the symbol for absolute value. | Chapter 9: 9-3 through 9-5
• 9-3 Compare and Order Integers—pp. 200-201
• 9-4 Absolute Value as Magnitude—pp. 202-203
• 9-5 Rational Numbers—pp. 204-205 |
| 5. Identify the natural, whole and integer components of the real number system | Chapter 9: 9-5
• 9-5 Rational Numbers—pp. 204-205 |
| 6. Apply order of operations to simplify expressions | Chapter 4: 4-2
• 4-2 Order of Operations—pp. 72-73
Chapter 8: 8-8
• 8-8 Order of Operations with Fractions—pp. 180-181 |

B. Addition and Subtraction

The student will:

- | | |
|--|-----|
| 1. Add and subtract integers with models and manipulation | N/A |
| 2. Multiply and divide integers with models and manipulation | N/A |

I. NUMBERS AND OPERATIONS

6th Grade Content Standards

Sadlier Math, Grade 6

C. Multiplication and Division

The student will:

1. Use multiplication and division of fractions and decimals specifically to use, understand and interpret rates and ratios

Chapter 10: 10-6 through 10-8

- 10-6 Rates and Unit Rates—pp. 238-239
- 10-7 Compare Prices—pp. 240-241
- 10-8 Equations for Proportional Relationships—pp. 242-243

Chapter 11: 11-1 through 11-9

- 11-1 Percent—pp. 254-255
- 11-2 Relate Percents to Fractions—pp. 256-257
- 11-3 Relate Percents to Decimals—pp. 258-259
- 11-4 Relate Decimals, Fractions, and Percents—pp. 260-261
- 11-5 Percents Greater Than 100%—pp. 262-263
- 11-6 Percents Less Than 1%—pp. 264-265
- 11-7 Find the Part—pp. 268-269
- 11-8 Find the Percent—pp. 270-271
- 11-9 Find the Whole—pp. 272-273

D. Properties

The student will:

1. Identify and use the inverse property of multiplication (i.e., $\frac{1}{2} * 2 = 1$)

Chapter 8: 8-2

- 8-2 Properties of Multiplication—pp. 166-167 (Inverse Property of Multiplication)

2. Use the commutative, associative and identity properties and zero property of multiplication to demonstrate that expressions in different forms can be equivalent

Chapter 8: 8-2

- 8-2 Properties of Multiplication—pp. 166-167

E. Fractions/Decimals/Percents

The student will:

1. Find the least common multiple and the greatest common factor

Chapter 6: 6-2 & 6-4

- 6-2 Greatest Common Factor—pp. 126-127
- 6-4 Least Common Multiple—pp. 132-133

2. Find the least common denominator for two or more fractions

Chapter 6: 6-1 through 6-5

- 6-1 Prime Factorization—pp. 124-125
- 6-2 Greatest Common Factor—pp. 126-127
- 6-3 The Distributive Property and Common Factors—pp. 128-129
- 6-4 Least Common Multiple—pp. 132-133
- 6-5 Problem Solving: Make a List—pp. 134-135

I. NUMBERS AND OPERATIONS

6 th Grade Content Standards	Sadlier Math, Grade 6
<p>3. Add and subtract fractions with like and unlike denominators</p>	<p>See Grade 4</p> <p>Chapter 11: 11-2 & 11-5</p> <ul style="list-style-type: none"> • 11-2 Add Fractions: Like Denominators—pp. 226-227 • 11-5 Subtract Fractions: Like Denominators—pp. 232-233 <p>See Grade 5</p> <p>Chapter 6: 6-1 & 6-2</p> <ul style="list-style-type: none"> • 6-1 Model Addition with Unlike Denominators—pp. 122-123 • 6-2 Add Fractions: Unlike Denominators—pp. 124-125 <p>Chapter 7: 7-1 & 7-2</p> <ul style="list-style-type: none"> • 7-1 Model Subtraction of Fractions with Unlike Denominators—pp. 142-143 • 7-2 Subtract Fractions: Unlike Denominators—pp. 144-145 <p>See also Grade 6 related content</p> <p>Chapter 7: 7-5 & 7-6</p> <ul style="list-style-type: none"> • 7-5 Addition and Subtraction Expressions with Fractions—pp. 152-153 • 7-6 Addition and Subtraction Equations with Fractions—pp. 154-155
<p>4. Add and subtract mixed numbers with like and unlike denominators</p>	<p>See Grade 4</p> <p>Chapter 11: 11-7 & 11-8</p> <ul style="list-style-type: none"> • 11-7 Add Mixed Numbers: Like Denominators—pp. 238-239 • 11-8 Subtract Mixed Numbers: Like Denominators—pp. 240-241 <p>See Grade 5</p> <p>Chapter 6: 6-4 & 6-6</p> <ul style="list-style-type: none"> • 6-4 Add Mixed Numbers—pp. 130-131 • 6-6 Rename Mixed Number Sums—pp. 134-135 <p>Chapter 7: 7-4, 7-6 through 7-8</p> <ul style="list-style-type: none"> • 7-4 Model Subtraction with Mixed Numbers—pp. 150-151 • 7-6 Subtract Fractions and Whole Numbers from Mixed Numbers—pp. 154-155 • 7-7 Subtract Mixed Numbers: Rename Fractions—pp. 156-157 • 7-8 Subtract Mixed Numbers: Rename Whole Numbers and Fractions—pp. 158-159
<p>5. Change terminating decimals to fractions and fractions to decimals</p>	<p>Chapter 11: 11-2 through 11-4</p> <ul style="list-style-type: none"> • 11-2 Relate Percents to Fractions—pp. 256-257 • 11-3 Relate Percents to Decimals—pp. 258-259 • 11-4 Relate Decimals, Fractions, and Percents—pp. 260-261
<p>6. Add and subtract decimals</p>	<p>Chapter 1: 1-2 & 1-3</p> <ul style="list-style-type: none"> • 1-2 Add Decimals—pp. 4-5 • 1-3 Subtract Decimals—pp. 6-7
<p>7. Round numbers less than 1 to tenths, hundredths and thousandths</p>	<p>Chapter 1: 1-1</p> <ul style="list-style-type: none"> • 1-1 Estimate Decimal Sums and Differences—pp. 2-3 <p>Chapter 2: 2-2</p> <ul style="list-style-type: none"> • 2-2 Estimate Decimal Products—pp. 24-25

I. NUMBERS AND OPERATIONS	
6 th Grade Content Standards	<i>Sadlier Math, Grade 6</i>
8. Multiply and divide decimals (with both whole numbers and decimals in the divisor)	<p>Chapter 2: 2-1 & 2-3</p> <ul style="list-style-type: none"> 2-1 Multiply Decimals by 0.1, 0.01, and 0.001—pp. 22-23 2-3 Multiply with Decimals—pp. 26-27 <p>Chapter 3: 3-2 through 3-4, 3-6 & 3-7</p> <ul style="list-style-type: none"> 3-2 Divide Decimals by 10, 100, and 1000—pp. 44-45 3-3 Divide Decimals by Whole Numbers—pp. 46-47 3-4 Divide Decimals by 0.1, 0.01, and 0.001—pp. 50-51 3-6 Decimal Divisors—pp. 54-55 3-7 Zeros in Division—pp. 56-57
The student will:	
1. Multiply fractions and mixed numbers	<p>Chapter 8: 8-1</p> <ul style="list-style-type: none"> 8-1 Multiply Fractions—pp. 164-165
2. Identify and use reciprocal numbers	<p>Chapter 8: 8-2</p> <ul style="list-style-type: none"> 8-2 Properties of Multiplication—pp. 166-167 <p>See also Grade 5</p> <p>Chapter 9: 9-2</p> <ul style="list-style-type: none"> 9-2 Reciprocals—pp. 200-201
3. Divide fractions and mixed numbers	<p>Chapter 8: 8-2 through 8-7</p> <ul style="list-style-type: none"> 8-3 Meaning of Division by a Fraction—pp. 168-169 8-4 Model Dividing Fractions by Fractions—pp. 170-171 8-5 Divide Fractions by Fractions—pp. 172-173 8-6 Estimate Quotients of Fractions and Mixed Numbers—pp. 174-175 8-7 Divide with Whole and Mixed Numbers—pp. 176-177
4. Round decimals and fractions	<p>Chapter 1: 1-1 through 1-3</p> <ul style="list-style-type: none"> 1-1 Estimate Decimal Sums and Differences—pp. 2-3 (round to estimate cost) 1-2 Add Decimals—pp. 4-5 (estimate by rounding) 1-3 Subtract Decimals—pp. 6-7 (estimate by rounding) <p>Chapter 2: 2-2 & 2-3</p> <ul style="list-style-type: none"> 2-2 Estimate Decimal Products—pp. 24-25 (round to estimate) 2-3 Multiply with Decimals—pp. 26-27 (estimate by rounding) <p>See also Grade 5</p> <p>Chapter 2: 2-4</p> <ul style="list-style-type: none"> 2-4 Round Decimals—pp. 32-33
5. Convert between fractions, decimals and percent	<p>Chapter 7: 7-2 through 7-4</p> <ul style="list-style-type: none"> 7-2 Relate Fractions and Decimals—pp. 144-145 7-3 Rename Fractions as Decimals—pp. 146-147 7-4 Rename Decimals as Fractions—pp. 148-149

II. MEASUREMENT

6 th Grade Content Standards	Sadlier Math, Grade 6
The student will:	
1. Continue to measure with accuracy to the nearest $\frac{1}{16}$ th inch and millimeter	See Grade 4 Chapter 14: 14-1 & 14-6 <ul style="list-style-type: none"> 14-1 Measure with Inches—pp. 296-297 14-6 Metric Units of Length—pp. 308-311
2. Continue to convert customary units of measure	Chapter 12: 12-1 <ul style="list-style-type: none"> 12-1 Convert Customary Units—pp. 282-283
3. Convert metric units of measurement using multiplication and division	Chapter 12: 12-2 <ul style="list-style-type: none"> 12-2 Convert Metric Units—pp. 284-285

III. GEOMETRY

6 th Grade Content Standards	Sadlier Math, Grade 6
GOAL: Students will identify, define and calculate area, perimeter, volume and surface area of two-dimensional and three-dimensional figures using the proper formulas and tools, in real-world and mathematical problems. Students will use formulas appropriately.	
1. Identify properties of supplementary and complementary angles	N/A
2. Define properties of triangles as a figure whose interior angles add up to 180 degrees	See Grade 4 Chapter 17: 17-3 <ul style="list-style-type: none"> 17-3 Triangles—pp. 374-375 (triangle's angle measures equal 180 degrees)
3. Define basic transformations to include translation, reflection and rotation	Chapter 9: 9-8 <ul style="list-style-type: none"> 9-8 Reflections of Points—pp. 212-213
4. Use geometric tools (protractor, straight edge) to draw and measure angles	See Grade 4 Chapter 16: 16-3 <ul style="list-style-type: none"> 16-3 Measure Angles—pp. 356-357 (use a protractor)
5. Define similar and congruent figures and their corresponding line segments and angles	N/A

III. GEOMETRY

6 th Grade Content Standards	Sadlier Math, Grade 6
6. Identify properties of vertical, adjacent and straight angle	See Grade 4 Chapter 16: 16-3 • 16-3 Measure Angles—pp. 356–357
7. Calculate the area of squares, triangles, rectangles, parallelograms and circles and show why the formulas are valid (with manipulatives and concrete examples)	Chapter 14: 14-1 through 14-6 • 14-1 Areas of Parallelograms and Rhombuses—pp. 316–317 • 14-2 Areas of Triangles—pp. 318–319 • 14-3 Areas of Trapezoids—pp. 320–321 • 14-4 Circumferences and Areas of Circles—pp. 324–325 • 14-5 Areas of Regular Polygons—pp. 326–327 • 14-6 Areas of Composite Figures—pp. 328–329
8. Understand and graph in the coordinate plane in all quadrants	Chapter 9: 9-17 through 9-10 • 9-7 Plot Points in the Coordinate Plane—pp. 210–211 • 9-8 Reflections of Points—pp. 212–213 • 9-9 Distance on the Coordinate Plane—pp. 214–215 • 9-10 Plot Polygons—pp. 216–217
9. Identify properties of quadrilaterals	See Grade 4 Chapter 15: 15-3 & 15-4 • 15-3 Quadrilaterals—pp. 348–349 • 15-4 Classify Quadrilaterals—pp. 350–351

IV. STATISTICS, PROBABILITY AND DATA ANALYSIS

6 th Grade Content Standards	Sadlier Math, Grade 6
GOAL: Represent probabilities using whole numbers, fractions, decimals and percents. The student will:	
1. Construct, interpret and analyze bar graphs, line graphs, pictographs, histograms and circle graphs using fractions, decimals and percents	Chapter 17: 17-1 through 17-5 • 17-1 Dot Plots—pp. 378–379 • 17-2 Box Plots—pp. 380–381 • 17-3 Histograms—pp. 382–383 • 17-4 Data Distributions—pp. 386–387 • 17-5 Interpret Circle Graphs—pp. 388–389 See also Grade 5 Chapter 17: 17-1 & 17-2 • 17-1 Line Plots with Whole Numbers and Decimals—pp. 380–381 • 17-2 Line Plots with Fractions and Mixed Numbers—pp. 382–383 See also Grade 4 Chapter 15: 15-5 • 15-5 Line Graphs—pp. 334–335 <i>continued</i>

IV. STATISTICS, PROBABILITY AND DATA ANALYSIS

6 th Grade Content Standards	<i>Sadlier Math, Grade 6</i>
	See also Grade 3 Chapter 12: 12-1 through 12-8 <ul style="list-style-type: none"> • 12-1 Read Picture Graphs—pp. 252–253 • 12-2 Make Picture Graphs—pp. 254–255 • 12-3 Read Bar Graphs—pp. 256–257 • 12-4 Make Bar Graphs—pp. 258–259
2. Calculate probabilities of dependent and independent events using real-world and mathematical problems with fractions, decimals and percents	N/A
3. Theoretical probability	Chapter 18: 18-4 <ul style="list-style-type: none"> • 18-4 Theoretical Probability—online
4. Measures of central tendency: mean, median, mode and range	Chapter 16: 16-2 & 16-3 <ul style="list-style-type: none"> • 16-2 Measures of Center—pp. 360–361 • 16-3 Measures of Variation: Range and Interquartile Range—pp. 362–363

V. ALGEBRA

6 th Grade Content Standards	<i>Sadlier Math, Grade 6</i>
The student will:	
1. Write mathematical expressions and equations that correspond to given situations	Chapter 1: 1-4 <ul style="list-style-type: none"> • 1-4 Write Addition and Subtraction Expressions—pp. 10–11 Chapter 2: 2-4 <ul style="list-style-type: none"> • 2-4 Write Multiplication Expressions—pp. 30–31 Chapter 3: 3-8 <ul style="list-style-type: none"> • 3-8 Write Division Expressions—pp. 58–59 Chapter 4: 4-7 <ul style="list-style-type: none"> • 4-7 Apply Properties to Write Equivalent Expressions—pp. 84–85 Chapter 5: 5-4 <ul style="list-style-type: none"> • 5-4 Write and Solve Equations—pp. 104–105
2. Evaluate expressions by plugging in for variables	Chapter 1: 1-5 <ul style="list-style-type: none"> • 1-5 Evaluate Addition and Subtraction Expressions—pp. 12–13 Chapter 2: 2-5 <ul style="list-style-type: none"> • 2-5 Evaluate Multiplication Expressions—pp. 32–33 Chapter 3: 3-9 <ul style="list-style-type: none"> • 3-9 Evaluate Division Expressions—pp. 60–61 Chapter 5: 5-4 <ul style="list-style-type: none"> • 5-4 Write and Solve Equations—pp. 104–105

V. ALGEBRA	
6th Grade Content Standards	Sadlier Math, Grade 6
3. Use expressions and formulas to solve problems	<p>Chapter 1: 1-4 & 1-5</p> <ul style="list-style-type: none"> • 1-4 Write Addition and Subtraction Expressions—pp. 10-11 • 1-5 Evaluate Addition and Subtraction Expressions—pp. 12-13 <p>Chapter 2: 2-4 & 2-5</p> <ul style="list-style-type: none"> • 2-4 Write Multiplication Expressions—pp. 30-31 • 2-5 Evaluate Multiplication Expressions—pp. 32-33 <p>Chapter 3: 3-8 & 3-9</p> <ul style="list-style-type: none"> • 3-8 Write Division Expressions—pp. 58-59 • 3-9 Evaluate Division Expressions—pp. 60-61 <p>Chapter 4: 4-7 & 4-9</p> <ul style="list-style-type: none"> • 4-7 Apply Properties to Write Equivalent Expressions—pp. 84-85 • 4-9 Use Formulas—pp. 88-89 <p>Chapter 5: 5-2 through 5-4</p> <ul style="list-style-type: none"> • 5-2 Addition and Subtraction Equations—pp. 100-101 • 5-3 Multiplication and Division Equations—pp. 102-103 • 5-4 Write and Solve Equations—pp. 104-105
4. Prove that the solutions to an equation are those values that make the equations true	<p>Chapter 5: 5-1 through 5-4</p> <ul style="list-style-type: none"> • 5-1 Solutions of Equations—pp. 98-99 • 5-2 Addition and Subtraction Equations—pp. 100-101 • 5-3 Multiplication and Division Equations—pp. 102-103 • 5-4 Write and Solve Equations—pp. 104-105
5. Estimate and solve simple one-step equations	<p>Chapter 1: 1-1, 1-4 & 1-5</p> <ul style="list-style-type: none"> • 1-1 Estimate Decimal Sums and Differences—pp. 2-3 • 1-4 Write Addition and Subtraction Expressions—pp. 10-11 • 1-5 Evaluate Addition and Subtraction Expressions—pp. 12-13 <p>Chapter 2: 2-2</p> <ul style="list-style-type: none"> • 2-2 Estimate Decimal Products—pp. 24-25 <p>Chapter 3: 3-5</p> <ul style="list-style-type: none"> • 3-5 Estimate Decimal Quotients—pp. 52-53 <p>Chapter 5: 5-3 & 5-4</p> <ul style="list-style-type: none"> • 5-3 Multiplication and Division Equations—pp. 102-103 (estimating products and quotients) • 5-4 Write and Solve Equations—pp. 104-105
1. Construct and analyze tables and use equations to describe simple relationships (such as $3x = y$)	<p>Chapter 13: 13-2</p> <ul style="list-style-type: none"> • 13-2 Relationships in Words and Tables—pp. 300-301
2. Identify and extend geometric and arithmetic sequences	N/A
3. Write, solve and apply proportions	<p>Chapter 10: 10-8</p> <ul style="list-style-type: none"> • 10-8 Equations for Proportional Relationships—pp. 242-24