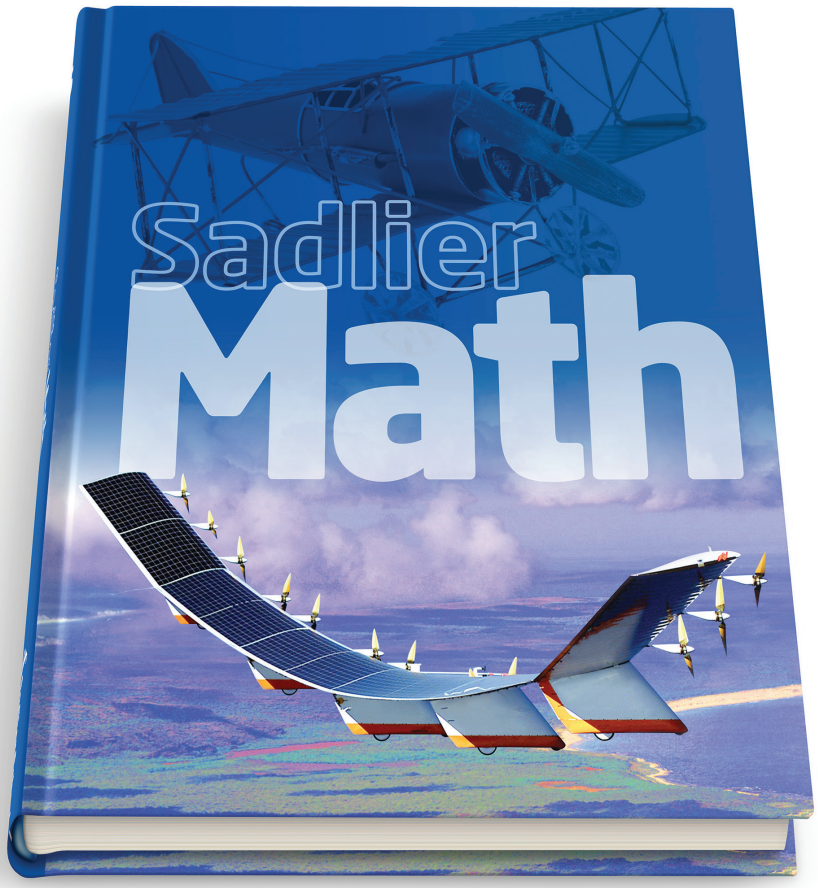
Sadlier Math™

Correlation to the Minnesota Academic Standards in Mathematics

Grade 5



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NUMBER & OPERATION

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Divide multi-digit numbers; solve real-world and mathematical problems using arithmetic.	
5.1.1.1 Divide multi-digit numbers, using efficient and generalizable procedures, based on knowledge of place value, including standard algorithms. Recognize that quotients can be represented in a variety of ways, including a whole number with a remainder, a fraction or mixed number, or a decimal. *For example:* Dividing 153 by 7 can be used to convert the improper fraction $\frac{153}{7}$ to the mixed number $21\frac{6}{7}$.	**Chapter 4: 4-1 through 4-8** • 4-3 Divide by One-Digit Numbers—pp. 72–73 (Find whole-number quotients of whole numbers with 4-digit dividends and 1-digit divisors; TE Develop Concepts: Find and Place the First Digit of the Quotient) • 4-4 Zeros in the Quotient—pp. 74–75 (Divide by one-digit divisors to find quotients with zeros; TE Develop Concepts: How Many Digits in the Quotient?) • 4-5 Divisibility and Mental Math—pp. 76–77 (Use divisibility rules to mentally determine one-digit factors; TE Develop Concepts: Forming Equal Groups) • 4-6 Use Arrays and Area Models to Divide—pp. 80–81 (Use arrays and area models to illustrate the process of division; TE Develop Concepts: Use Area Models to Multiply and Divide) • 4-7 Use Strategies to Divide—pp. 82–83 (Use strategies based on the relationship between multiplication and division to divide; TE Develop Concepts: Use a Bar Diagram to Introduce Partial Quotients) • 4-8 Divide by Two-Digit Numbers—pp. 84–85 (Use a standard algorithm to divide numbers with up to 4 digits by two-digit divisors; TE Develop Concepts: Use a Multiplication Table to Divide)
5.1.1.2 Consider the context in which a problem is situated to select the most useful form of the quotient for the solution and use the context to interpret the quotient appropriately. *For example:* If 77 amusement ride tickets are to be distributed equally among 4 children, each child will receive 19 tickets, and there will be one left over. If $77 is to be distributed equally among 4 children, each will receive $19.25, with nothing left over.	**Chapter 5: 5-8** • 5-8 Interpret a Remainder—pp. 114–115 (Interpret a fraction as a division, and solve word problems involving fractions and mixed numbers; TE Develop Concepts: What Would You Do?—interpret remainder)
5.1.1.3 Estimate solutions to arithmetic problems in order to assess the reasonableness of results.	**Chapter 1: 1-6** • 1-6 Estimate Sums and Differences—pp. 14–15 (Use front-end estimation and rounding to estimate sums and differences of multi-digit numbers; TE Develop Concepts: Explore Front-End Estimation) **Chapter 2: 2-4 & 2-6** • 2-4 Round Decimals—pp. 32–33 (Use place value to round decimal numbers; TE Develop Concepts: Compare Numbers) • 2-6 Estimate with Decimals—pp. 36–37 (Use front-end estimation and rounding to estimate sums and differences of decimals; TE Develop Concepts: Estimation) **Chapter 3: 3-6** • 3-3 Estimate Products—pp. 48–49 (Estimate products of whole numbers; TE Develop Concepts: Rounding Numbers) **Chapter 4: 4-2** • 4-2 Estimation: Compatible Numbers—pp. 70–71 (Use compatible numbers to estimate quotients; TE Develop Concepts: Explore Compatible Numbers) *continued*

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Grade 5 Content Standards	*Sadlier Math*, Grade 5
	Chapter 5: 5-3 • 5-3 Estimation and Equivalent Fractions—pp. 102–103 (Determine if a fraction is closer to 0, 1/2, or 1; Find equivalent fractions; TE Develop Concepts: Model Fractions with Different Equal Parts) **Chapter 6: 6-3** • 6-3 Fraction Addition: Estimation and Reasonableness—pp. 126–127 (Use benchmarks and number sense to estimate and check answers involving fractions; TE Develop Concepts: Show Me Half—equivalent fractions) **Chapter 7: 7-3 & 7-5** • 7-3 Subtract Fractions: Estimation and Reasonableness—pp. 146–147 (Use benchmark fractions to assess the reasonableness of answers; TE Develop Concepts: Estimating Fractions) • 7-5 Estimate Sums and Differences of Mixed Numbers—pp. 152–153 (Use rounding and frontend estimation to estimate sums and differences of mixed numbers; TE Develop Concepts: Rounding Fractions) **Chapter 8: 8-7** • 8-7 Estimate Products with Mixed Numbers—pp. 182–183 (Use rounding and compatible numbers to estimate products of mixed numbers; TE Develop Concepts: Betweeness—estimate mixed numbers) **Chapter 10: 10-3 & 10-7** • 10-3 Estimate Decimal Sums—pp. 224–225 (Use front-end estimation and rounding to estimate decimal sums; TE Develop Concepts: Dollar Target) • 10-7 Addition with Money—pp. 234–235 (Use estimation, models, and addition strategies to add amounts of money; TE Develop Concepts: Many Ways to Make $1.00) **Chapter 11: 11-2 & 11-5** • 11-2 Estimate Decimal Differences—pp. 244–245 (Estimate decimal differences; TE Develop Concepts: Estimate Differences) • 11-5 Subtraction with Money—pp. 252–253 (Use estimation and addition strategies to subtract with money; TE Develop Concepts: Applying Estimation in the Real-World) **Chapter 12: 12-3** • 12-3 Estimate Decimal Products—pp. 266–267 (Estimate decimal products; TE Develop Concepts: Rounding and Assessing Estimations) **Chapter 13: 13-3, 13-4 & 13-6** • 13-3 Estimate Decimal Quotients—pp. 292–293 (Estimate decimal quotients; TE Develop Concepts: Compatible Numbers) • 13-4 Estimate with Money—pp. 294–295 (Estimate quotients of money amounts; TE Develop Concepts: Money and Unit Prices) • 13-6 Zeros in Decimal Quotients—pp. 298–299 (Divide decimals using zeros as placeholders; TE Develop Concepts: Estimating Quotients)

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Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.1.1.4 Solve real-world and mathematical problems requiring addition, subtraction, multiplication and division of multi-digit whole numbers. Use various strategies, including the inverse relationships between operations, the use of technology, and the context of the problem to assess the reasonableness of results. *For example:* The calculation 117 ÷ 9 = 13 can be checked by multiplying 9 and 13.	**Chapter 1: 1-4 through 1-7** • 1-4 Problem Solving: Use the Four-Step Process—pp. 10–11 • 1-5 Addition Properties and Subtraction Rules—pp. 12–13 • 1-6 Estimate Sums and Differences—pp. 14–15 • 1-7 Find Sums and Differences—pp. 16–17 **Chapter 3: 3-1 through 3-8** • 3-1 Multiplication Properties—pp. 44–45 • 3-2 Multiplication Patterns—pp. 46–47 • 3-3 Estimate Products—pp. 48–49 • 3-4 Zeros in the Multiplicand—pp. 50–51 • 3-5 Multiply by Two-Digit Numbers—pp. 54–55 • 3-6 Problem Solving: Guess and Test—pp. 56–57 • 3-7 Multiply by Three-Digit Numbers—pp. 58–59 • 3-8 Zeros in the Multiplier—pp. 60–61 **Chapter 4: 4-1 through 4-9** • 4-1 Division Patterns—pp. 68–69 • 4-2 Estimation: Compatible Numbers—pp. 70–71 • 4-3 Divide by One-Digit Numbers—pp. 72–73 • 4-4 Zeros in the Quotient—pp. 74–75 • 4-5 Divisibility and Mental Math—pp. 76–77 • 4-6 Use Arrays and Area Models to Divide—pp. 80–81 • 4-7 Use Strategies to Divide—pp. 82–83 • 4-8 Divide by Two-Digit Numbers—pp. 84–85 • 4-9 Problem Solving: Work Backward—pp. 86–87

Read, write, represent and compare fractions and decimals; recognize and write equivalent fractions; convert between fractions and decimals; use fractions and decimals in real-world and mathematical situations.

5.1.2.1 Read and write decimals using place value to describe decimals in terms of groups from millionths to millions. *For example:* Possible names for the number 0.0037 are: 37 ten thousandths 3 thousandths + 7 ten thousandths; a possible name for the number 1.5 is 15 tenths.	**Chapter 1: 1-1 & 1-2** • 1-1 Place Value to Billions—pp. 2–3 (Understand place value through billions; TE Develop Concepts: Use the Place-Value Chart to Build a Number) • 1-2 Expanded Form—pp. 4–5 (Read and write whole numbers through billions in expanded form; TE Develop Concepts: Use the Place-Value Chart to Build a Number) **Chapter 2: 2-1 & 2-2** • 2-1 Thousandths—pp. 24–25 (Read and write decimals to thousandths using standard form and word form; TE Develop Concepts: Compare Numbers) • 2-2 Decimals and Expanded Form—pp. 26–27 (Read and write decimals to thousandths using expanded form; TE Develop Concepts: Compare Numbers)
5.1.2.2 Find 0.1 more than a number and 0.1 less than a number. Find 0.01 more than a number and 0.01 less than a number. Find 0.001 more than a number and 0.001 less than a number.	**Chapter 2: 2-1 & 2-2** • 2-1 Thousandths—pp. 24–25 (Read and write decimals to thousandths using standard form and word form; TE Develop Concepts: Compare Numbers) • 2-2 Decimals and Expanded Form—pp. 26–27 (Read and write decimals to thousandths using expanded form; TE Develop Concepts: Compare Numbers)

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5.1.2.3 Order fractions and decimals, including mixed numbers and improper fractions, and locate on a number line. *For example:* Which is larger 1.25 or $\frac{6}{5}$? *Another example:* In order to work properly, a part must fit through a 0.24 inch wide space. If a part is $\frac{1}{4}$ inch wide, will it fit?	**Chapter 2: 2-3** • 2-3 Compare and Order Decimals—pp. 30–31 (Compare and order decimals using symbols to record the comparison; TE Develop Concepts: Compare Numbers) **Chapter 5: 5-7** • 5-7 Compare and Order Fractions and Mixed Numbers—pp. 112–113 (Compare and order fractions and mixed numbers; TE Develop Concepts: Compare Fractions Models)
5.1.2.4 Recognize and generate equivalent decimals, fractions, mixed numbers and improper fractions in various contexts. *For example:* When comparing 1.5 and $\frac{19}{12}$, note that $1.5 = 1\frac{1}{2} = 1\frac{6}{12} = \frac{18}{12}$ so $1.5 < \frac{19}{12}$.	**Chapter 2: 2-1 & 2-3** • 2-1 Thousandths—pp. 24–25 (Read and write decimals to thousandths using standard form and word form; write equivalent decimals; TE Develop Concepts: Compare Numbers) • 2-3 Compare and Order Decimals—pp. 30–31 (Compare and order decimals using symbols to record the comparison; TE Develop Concepts: Compare Numbers) **Chapter 5: 5-3 & 5-6** • 5-3 Estimation and Equivalent Fractions—pp. 102–103 (Determine if a fraction is closer to 0, 1/2, or 1; Find equivalent fractions; TE Develop Concepts: Model Fractions with Different Equal Parts) • 5-6 Fractions Greater Than or Equal to One—pp. 110–111 (Identify improper fractions; Rename improper fractions as a whole or mixed number; TE Develop Concepts: Use Fraction Models to Compare Fractions to One Whole) **Chapter 6: 6-1 through 6-4** • 6-1 Model Addition with Unlike Denominators—pp. 122–123 (Equivalent fractions) • 6-2 Add Fractions: Unlike Denominators—pp. 124–125 (Add fractions with unlike denominators; TE Develop Concepts: Make More Equal Parts) • 6-3 Fraction Addition: Estimation and Reasonableness—pp. 126–127 (Use benchmarks and number sense to estimate and check answers involving fractions; TE Develop Concepts: Show Me Half—equivalent fractions) • 6-4 Add Mixed Numbers—pp. 130–131 (Add mixed numbers with unlike denominators; equivalent fractions) • 6-5 Problem Solving: Use a Model—pp. 132–133 (Focus on using a model to solve problems; equivalent fractions) • 6-6 Rename Mixed Number Sums—pp. 134–135 (Add mixed numbers and simplify the sum; equivalent fractions; TE Develop Concepts: Sums Greater than 1) **Chapter 7: 7-1, 7-2, 7-4, 7-6 & 7-7** • 7-1 Model Subtraction of Fractions with Unlike Denominators—pp. 142–143 (Use models to subtract fractions with unlike denominators; TE Develop Concepts: Create Equivalent Fraction Models) • 7-2 Subtract Fractions: Unlike Denominators—pp. 144–145 (Subtract fractions with unlike denominators) • 7-4 Model Subtraction with Mixed Numbers—pp. 150–151 (Use models to subtract with mixed numbers; equivalent fractions; TE Develop Concepts: Draw a Mixed Number Fraction Model) • 7-6 Subtract Fractions and Whole Numbers from Mixed Numbers—pp. 154–155 (Subtract whole numbers and proper fractions from mixed numbers; write equivalent fractions) *continued*

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	• 7-7 Subtract Mixed Numbers: Rename Fractions—pp. 156–157 (Subtract mixed numbers with like or unlike denominators) **Chapter 8: 8-1** • 8-1 Model Multiplying Fractions—pp. 168–169 (Use models to multiply a whole number or fraction by a fraction; equivalent fractions) **Chapter 12: 12-6** • 12-6 Model Multiplying Two Decimals—pp. 274–275 (Use models to multiply a decimal by a decimal; equivalent fractions)
5.1.2.5 Round numbers to the nearest 0.1, 0.01 and 0.001. *For example:* Fifth grade students used a calculator to find the mean of the monthly allowance in their class. The calculator display shows 25.80645161. Round this number to the nearest cent.	**Chapter 2: 2-4** • 2-4 Round Decimals—pp. 32–33 (Use place value to round decimal numbers; TE Develop Concepts: Compare Numbers)

Add and subtract fractions, mixed numbers and decimals to solve real-world and mathematical problems.

5.1.3.1 Add and subtract decimals and fractions, using efficient and generalizable procedures, including standard algorithms.	**Chapter 6: 6-1 through 6-6** • 6-1 Model Addition with Unlike Denominators—pp. 122–123 • 6-2 Add Fractions: Unlike Denominators—pp. 124–125 • 6-3 Fraction Addition: Estimation and Reasonableness—pp. 126–127 • 6-4 Add Mixed Numbers—pp. 130–131 • 6-5 Problem Solving: Use a Model—pp. 132–133 • 6-6 Rename Mixed Number Sums—pp. 134–135 **Chapter 7: 7-1 through 7-9** • 7-1 Model Subtraction of Fractions with Unlike Denominators—pp. 142–143 • 7-2 Subtract Fractions: Unlike Denominators—pp. 144–145 • 7-3 Subtract Fractions: Estimation and Reasonableness—pp. 146–147 • 7-4 Model Subtraction with Mixed Numbers—pp. 150–151 • 7-5 Estimate Sums and Differences of Mixed Numbers—pp. 152–153 • 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 • 7-9 Problem Solving: Write and Solve an Equation—pp. 160–161 **Chapter 10: 10-1 through 10-7** • 10-1 Use Models to Add Decimals—pp. 220–221 • 10-2 Use Properties to Add Decimals—pp. 222–223 • 10-3 Estimate Decimal Sums—pp. 224–225 • 10-4 Problem Solving: Draw a Picture—pp. 228–229 • 10-5 Add Decimals: Hundredths—pp. 230–231 • 10-6 Add Decimals: Thousandths—pp. 232–233 • 10-7 Addition with Money—pp. 234–235

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Grade 5 Content Standards	*Sadlier Math*, Grade 5
	Chapter 11: 11-1 through 11-6 • 11-1 Use Models to Subtract Decimals—pp. 242–243 • 11-2 Estimate Decimal Differences—pp. 244–245 • 11-3 Subtract Decimals: Hundredths—pp. 248–249 • 11-4 Subtract Decimals: Thousandths—pp. 250–251 • 11-5 Subtraction with Money—pp. 252–253 • 11-6 Problem Solving: Use a Model—pp. 254–255
5.1.3.2 Model addition and subtraction of fractions and decimals using a variety of representations. *For example:* Represent $\frac{2}{3} + \frac{1}{4}$ and $\frac{2}{3} - \frac{1}{4}$ by drawing a rectangle divided into 4 columns and 3 rows and shading the appropriate parts or by using fraction circles or bars.	**Chapter 6: 6-1** • 6-1 Model Addition with Unlike Denominators—pp. 122–123 (Use models to add fractions with unlike denominators; TE Develop Concepts: Model Fractions) **Chapter 7: 7-1** • 7-1 Model Subtraction of Fractions with Unlike Denominators—pp. 142–143 (Use models to subtract fractions with unlike denominators; TE Develop Concepts: Create Equivalent Fraction Models) **Chapter 10: 10-1** • 10-1 Use Models to Add Decimals—pp. 220–221 (Use base-ten models to add decimals; TE Develop Concepts: Solve Decimal Riddles) **Chapter 11: 11-1** • 11-1 Use Models to Subtract Decimals—pp. 242–243 (Use concrete models to subtract decimals; TE Develop Concepts: Model Subtraction)
5.1.3.3 Estimate sums and differences of decimals and fractions to assess the reasonableness of results. *For example:* Recognize that $12\frac{2}{5} - 3\frac{3}{4}$ is between 8 and 9 (since $\frac{2}{5} < \frac{3}{4}$).	**Chapter 1: 1-6** • 1-6 Estimate Sums and Differences—pp. 14–15 (Use front-end estimation and rounding to estimate sums and differences of multi-digit numbers; TE Develop Concepts: Explore Front-End Estimation) **Chapter 7: 7-3 & 7-5** • 7-3 Subtract Fractions: Estimation and Reasonableness—pp. 146–147 (Use benchmark fractions to assess the reasonableness of answers; TE Develop Concepts: Estimating Fractions) • 7-5 Estimate Sums and Differences of Mixed Numbers—pp. 152–153 (Use rounding and front-end estimation to estimate sums and differences of mixed numbers; TE Develop Concepts: Rounding Fractions) **Chapter 10: 10-3** • 10-3 Estimate Decimal Sums—pp. 224–225 (Use front-end estimation and rounding to estimate decimal sums; TE Develop Concepts: Dollar Target) **Chapter 11: 11-2** • 11-2 Estimate Decimal Differences—pp. 244–245 (Estimate decimal differences; TE Develop Concepts: Estimate Differences)

NUMBER & OPERATION

Grade 5 Content Standards	*Sadlier Math*, Grade 5
5.1.3.4 Solve real-world and mathematical problems requiring addition and subtraction of decimals, fractions and mixed numbers, including those involving measurement, geometry and data. *For example:* Calculate the perimeter of the soccer field when the length is 109.7 meters and the width is 73.1 meters.	**Chapter 6: 6-1 through 6-6** • 6-1 Model Addition with Unlike Denominators—pp. 122–123 • 6-2 Add Fractions: Unlike Denominators—pp. 124–125 • 6-3 Fraction Addition: Estimation and Reasonableness—pp. 126–127 • 6-4 Add Mixed Numbers—pp. 130–131 • 6-5 Problem Solving: Use a Model—pp. 132–133 • 6-6 Rename Mixed Number Sums—pp. 134–135 **Chapter 7: 7-1 through 7-9** • 7-1 Model Subtraction of Fractions with Unlike Denominators—pp. 142–143 • 7-2 Subtract Fractions: Unlike Denominators—pp. 144–145 • 7-3 Subtract Fractions: Estimation and Reasonableness—pp. 146–147 • 7-4 Model Subtraction with Mixed Numbers—pp. 150–151 • 7-5 Estimate Sums and Differences of Mixed Numbers—pp. 152–153 • 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 • 7-9 Problem Solving: Write and Solve an Equation—pp. 160–161 **Chapter 10: 10-1 through 10-7** • 10-1 Use Models to Add Decimals—pp. 220–221 • 10-2 Use Properties to Add Decimals—pp. 222–223 • 10-3 Estimate Decimal Sums—pp. 224–225 • 10-4 Problem Solving: Draw a Picture—pp. 228–229 • 10-5 Add Decimals: Hundredths—pp. 230–231 • 10-6 Add Decimals: Thousandths—pp. 232–233 • 10-7 Addition with Money—pp. 234–235 **Chapter 11: 11-1 through 11-6** • 11-1 Use Models to Subtract Decimals—pp. 242–243 • 11-2 Estimate Decimal Differences—pp. 244–245 • 11-3 Subtract Decimals: Hundredths—pp. 248–249 • 11-4 Subtract Decimals: Thousandths—pp. 250–251 • 11-5 Subtraction with Money—pp. 252–253 • 11-6 Problem Solving: Use a Model—pp. 254–255 **Chapter 14: 14-1 through 14-9** • 14-1 Relate Customary Units of Length—pp. 316–317 • 14-2 Relate Customary Units of Capacity—pp. 318–319 • 14-3 Relate Customary Units of Weight—pp. 320–321 • 14-4 Compute with Customary Units—pp. 322–323 • 14-5 Relate Metric Units of Length—pp. 326–327 • 14-6 Relate Metric Units of Capacity—pp. 328–329 • 14-7 Relate Metric Units of Mass—pp. 330–331 • 14-8 Compute with Metric Units—pp. 332–333 • 14-9 Problem Solving: Use the Four-Step Process—pp. 334–335 **Chapter 15: 15-4** • 15-4 Classify Quadrilaterals—pp. 350–351 **Chapter 15: 15-4** • 16-6 Problem Solving: Act it Out—pp. 372–373 **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

ALGEBRA

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Recognize and represent patterns of change; use patterns, tables, graphs and rules to solve real-world and mathematical problems.	
5.2.1.1 Create and use rules, tables, spreadsheets and graphs to describe patterns of change and solve problems. *For example:* An end-of-the-year party for 5th grade costs $100 to rent the room and $4.50 for each student. Know how to use a spreadsheet to create an input-output table that records the total cost of the party for any number of students between 90 and 150.	**Problem Solving Math Practices** • Look for a Pattern—p. xxvi **Chapter 3: 3-2** • 3-2 Multiplication Patterns—pp. 46–47 (Use patterns to multiply whole numbers by multiples of 10, 100, and 1000; TE Develop Concepts: Think About Multiplying by Multiples of 10) **Chapter 4: 4-1** • 4-1 Division Patterns—pp. 68–69 (Use patterns to divide whole numbers by multiples of 10, 100, or 1000; TE Develop Concepts: Use Place Value to Find Division Patterns) **Chapter 9: 9-1 through 9-3** • 9-1 Divide Whole Numbers by Unit Fractions—pp. 198–199 (TE Develop Concepts: Patterns in Quotients) • 9-2 Reciprocals—pp. 200–201 (Practice: Write a rule to describe the pattern) • 9-3 Divide Whole Numbers by Fractions—pp. 202–203 (TE Develop Concepts: Look for Patterns) **Chapter 11: 11-3** • 11-3 Subtract Decimals: Hundredths—pp. 248–249 (Practice: Write a pattern rule) **Chapter 12: 12-1 & 12-9** • 12-1 Multiply by Powers of 10—pp. 262–263 (Observe and use patterns of zeros when multiplying by a power of 10) • 12-9 Problem Solving: Compare Strategies—pp. 280–281 (Practice: use pattern to make a prediction) **Chapter 14: 14-5** • 14-5 Relate Metric Units of Length—pp. 326–327 (Write About It: Explain the pattern) **Chapter 15: 15-5** • 15-5 Problem Solving: Use a Model—pp. 352–353 (Practice: describe patterns) **Chapter 17: 17-5 & 17-6** • 17-5 Write Number Patterns—pp. 390–391 (Use pattern rules to generate patterns; find rules for given patterns; TE Develop Concepts: Displaying Patterns) • 17-6 Graph Number Patterns—pp. 392–393 (Graph ordered pairs from number patterns; Identify relationships between corresponding terms of two patterns; TE Develop Concepts: Use Tables to Solve Problems)
5.2.1.2 Use a rule or table to represent ordered pairs of positive integers and graph these ordered pairs on a coordinate system.	**Chapter 17: 17-3 & 17-6** • 17-3 The Coordinate Plane—pp. 386–387 (Plot and name ordered pairs on the coordinate plane; TE Develop Concepts: Two Kinds of Tables) • 17-6 Graph Number Patterns—pp. 392–393 (Graph ordered pairs from number patterns; Identify relationships between corresponding terms of two patterns; TE Develop Concepts: Use Tables to Solve Problems)

ALGEBRA

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Use properties of arithmetic to generate equivalent numerical expressions and evaluate expressions involving whole numbers.	
5.2.2.1 Apply the commutative, associative and distributive properties and order of operations to generate equivalent numerical expressions and to solve problems involving whole numbers. *For example:* Purchase 5 pencils at 19 cents and 7 erasers at 19 cents. The numerical expression is 5 × 19 + 7 × 19 which is the same as (5 + 7) × 19.	**Chapter 1: 1-5** • 1-5 Addition Properties and Subtraction Rules—pp. 12–13 (Use addition properties and subtraction rules to add and subtract multi-digit numbers; TE Develop Concepts: Use Place-Value Workmats to Model Addition Properties) **Chapter 3: 3-1** • 3-1 Multiplication Properties—pp. 44–45 (Use multiplication properties to compare and evaluate expressions; TE Develop Concepts: Use Properties to Verify Whole Number Products) **Chapter 4: 4-10** • 4-1 Division Patterns—pp. 68–69 (Write About It: discuss the commutative property) • 4-10 Order of Operations—pp. 88–89 (Use parentheses and brackets in numerical expressions and evaluate expressions using the order of operations; TE Develop Concepts: The Need for Order) • 5-1 Factors, Primes and Composite Numbers—pp. 98–99 (Commutative Property of Multiplication)
Understand and interpret equations and inequalities involving variables and whole numbers, and use them to represent and solve real-world and mathematical problems.	
5.2.3.1 Determine whether an equation or inequality involving a variable is true or false for a given value of the variable. *For example:* Determine whether the inequality 1.5 + x < 10 is true for x = 2.8, x = 8.1, or x = 9.2.	**Chapter 1: 1-5** • 1-5 Addition Properties and Subtraction Rules—pp. 12–13 (Use addition properties and subtraction rules to add and subtract multi-digit numbers; TE Develop Concepts: Use Place-Value Workmats to Model Addition Properties) **Chapter 3: 3-1** • 3-1 Multiplication Properties—pp. 44–45 (TE Mental Math: classify each equation as true or false) See also Grade 6 (inequalities) **Chapter 5: 5-1** • 5-5 Inequalities—pp. 108–109 (Write word sentences and math sentences that contain an inequality; TE Develop Concepts: Ordering Numbers (after simplifying expressions))
5.2.3.2 Represent real-world situations using equations and inequalities involving variables. Create real-world situations corresponding to equations and inequalities. *For example:* 250 – 27 × a = b can be used to represent the number of sheets of paper remaining from a packet of 250 sheets when each student in a class of 27 is given a certain number of sheets.	**Chapter 1: 1-4** • 1-4 Problem Solving: Use the Four-Step Process—pp. 10–11 (TE Develop Concepts: Write Equations to Represent Situations) **Chapter 7: 7-9** • 7-9 Problem Solving: Write and Solve an Equation—pp. 160–161 (Focus on writing and solving equations to solve problems; TE Develop Concepts: Checking Equations from Real-World Statements) **Chapter 9: 9-7** • 9-7 Problem Solving: Choose a Strategy—pp. 212–213 (Choose an appropriate strategy when solving a problem: Use a Model, Guess and Test, Write and Solve an Equation)

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Grade 5 Content Standards	*Sadlier Math*, Grade 5
	Chapter 12: 12-9 • 12-9 Problem Solving: Compare Strategies—pp. 280–281 (Compare strategies used in solving problems; Use a Model, Write and Solve an Equation) **Chapter 13: 13-8** • 13-8 Problem Solving: Work Backward—pp. 304–305 (Use the Work Backward strategy to solve problems; write and solve equations) **Chapter 16: 16-4** • 16-4 Volume Formulas—pp. 368–369 (TE Develop Concepts: Arrays and Equations) See also Grade 6 (inequalities) **Chapter 5: 5-1 through 5-9** • 5-5 Inequalities—pp. 108–109 (Write word sentences and math sentences that contain an inequality; TE Develop Concepts: Ordering Numbers (after simplifying expressions)) • 5-6 Solutions of Inequalities—pp. 110–111 (Use substitution to determine whether a value is a solution of an inequality; Identify solutions of an inequality on a number line; TE Develop Concepts: A Living Number Line) • 5-7 Write Inequalities—pp. 112–113 (Recognize when a real-world situation has a limit or boundary and write an inequality to model it; TE Develop Concepts: Inequality Families (write equations and inequalities)) • 5-8 Solve Inequalities—pp. 114–115 (Solve one-step inequalities; TE Develop Concepts: Equation Stations (equivalent equations)) • 5-9 Problem Solving: Write and Solve an Equation—pp. 116–117 (Use the problem-solving strategy write and solve an equation; TE Develop Concepts: Analyze Sale Prices (write equations, discounts/sales tax, best-value deal))
5.2.3.3 Evaluate expressions and solve equations involving variables when values for the variables are given. *For example:* Using the formula, $A = lw$, determine the area when the length is 5, and the width 6, and find the length when the area is 24 and the width is 4.	**Chapter 1: 1-4** • 1-4 Problem Solving: Use the Four-Step Process—pp. 10–11 (Solve problems by using the four-step process; solve equations; TE Develop Concepts: Write Equations to Represent Situations) **Chapter 3: 3-1 & 3-6** • 3-1 Multiplication Properties—pp. 44–45 (Use multiplication properties to compare and evaluate expressions; TE Develop Concepts: Use Properties to Verify Whole Number Products) • 3-6 Problem Solving: Guess and Test—pp. 56–57 (Homework: Write About It: Evaluate the expression) **Chapter 4: 4-10 & 4-11** • 4-10 Order of Operations—pp. 88–89 (Use parentheses and brackets in numerical expressions and evaluate expressions using the order of operations; TE Develop Concepts: The Need for Order) • 4-11 Expressions—pp. 90–91 (Write, evaluate, and compare numerical expressions; TE Develop Concepts: Model Grouping Symbols) **Chapter 7: 7-9** • 7-9 Problem Solving: Write and Solve an Equation—pp. 160–161 (Focus on writing and solving equations to solve problems; TE Develop Concepts: Checking Equations from Real-World Statements) **Chapter 8: 8-2** • 8-2 Multiply Fractions by Fractions—pp. 170–171 (Solve the equation) *continued*

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Grade 5 Content Standards	*Sadlier Math*, Grade 5
	Chapter 9: 9-6 • 9-6 Word Problems Involving Fraction Division—pp. 210–211 (Workbook: Solve the equation) **Chapter 16: 16-4** • 16-4 Volume Formulas—pp. 368–369 (Use formulas to find the volumes of rectangular prisms; TE Develop Concepts: Arrays and Equations)

GEOMETRY & MEASUREMENT

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Describe, classify, and draw representations of three-dimensional figures.	
5.3.1.1 Describe and classify three-dimensional figures including cubes, prisms and pyramids by the number of edges, faces or vertices as well as the types of faces.	**Chapter 16: 16-1** • 16-1 Solid Figures—pp. 360–361 (Identify solid figures and their attributes; Relate plane and solid figures to identify nets for solid figures; TE Develop Concepts: Two-Dimensional Objects)
5.3.1.2 Recognize and draw a net for a three-dimensional figure.	
Determine the area of triangles and quadrilaterals; determine the surface area and volume of rectangular prisms in various contexts.	
5.3.2.1 Develop and use formulas to determine the area of triangles, parallelograms and figures that can be decomposed into triangles.	**Chapter 8: 8-10** • 8-10 Find the Area of a Rectangle—pp. 188–189 (Use tiling or a formula to find the area of a rectangle with fractional side lengths; TE Develop Concepts: Explore Perimeter and Area of a Rectangle) See also Grade 6 **Chapter 14: 14-1 through 14-5** • 14-1 Areas of Parallelograms and Rhombuses—pp. 316–317 (Find the areas of parallelograms; TE Develop Concepts: Name Banners) • 14-2 Areas of Triangles—pp. 318–319 (Use a formula to find the area of triangles; TE Develop Concepts: Areas of Complex Figures) • 14-3 Areas of Trapezoids—pp. 320–321 (Use a formula to find the area of a trapezoid; TE Develop Concepts: Order of Operations & Formulas) • 14-4 Circumferences and Areas of Circles—pp. 324–325 (Find the circumference and area of a circle; TE Develop Concepts: Investigate Pi) • 14-5 Areas of Regular Polygons—pp. 326–327 (Find the area of a regular polygon; TE Develop Concepts: Regular Polygons) *continued*

GEOMETRY & MEASUREMENT

Grade 5 Content Standards	*Sadlier Math*, Grade 5
	• 14-6 Areas of Composite Figures—pp. 328–329 (Find the areas of composite figures; TE Develop Concepts: Creative Geometry (create pictures with shapes))
5.3.2.2 Use various tools and strategies to measure the volume and surface area of objects that are shaped like rectangular prisms. *For example:* Use a net or decompose the surface into rectangles. *Another example:* Measure the volume of a cereal box by using a ruler to measure its height, width and length, or by filling it with cereal and then emptying the cereal into containers of known volume.	**Chapter 16: 16-2 through 16-6** • 16-2 Cubic Measure—pp. 362–363 (Describe and use cubic measures; TE Develop Concepts: Measuring Volume) • 16-3 Volume of Rectangular Prisms—pp. 364–365 (Find volume by packing with unit cubes; TE Develop Concepts: Using Water to Measure Volumes of Solids) • 16-4 Volume Formulas—pp. 368–369 (Use formulas to find the volumes of rectangular prisms; TE Develop Concepts: Arrays and Equations) • 16-5 Volume of Composite Figures—pp. 370–371 (Find the volume of a solid figure composed of rectangular prisms; TE Develop Concepts: How can you use a model to find missing lengths?) • 16-6 Problem Solving: Act it Out—pp. 372–373 (Use the Act It Out strategy to solve problems; TE Develop Concepts: Handshake Problem) See Grade 6 (surface area) **Chapter 15: 15-1 through 15-3** • 15-1 Nets of Three-Dimensional Figures—pp. 338–339 (Use nets to represent three-dimensional figures; TE Develop Concepts: Relate Two-Dimensional and Three-Dimensional Figures) • 15-2 Use Nets to Find Surface Areas of Prisms—pp. 340–341 (Find the surface area of a prism; TE Develop Concepts: Relate Areas of Rectangles and Triangles to Surface Areas of Prisms) • 15-3 Use Nets to Find Surface Areas of Pyramids—pp. 342–343 (Find the surface area of a pyramid; TE Develop Concepts: Relate Areas of Squares and Triangles to Surface Areas of Pyramids)
5.3.2.3 Understand that the volume of a three-dimensional figure can be found by counting the total number of same-sized cubic units that fill a shape without gaps or overlaps. Use cubic units to label volume measurements. *For example:* Use cubes to find the volume of a small box.	**Chapter 16: 16-2 & 16-3** • 16-2 Cubic Measure—pp. 362–363 (Describe and use cubic measures; TE Develop Concepts: Measuring Volume) • 16-3 Volume of Rectangular Prisms—pp. 364–365 (Find volume by packing with unit cubes; TE Develop Concepts: Using Water to Measure Volumes of Solids)
5.3.2.4 Develop and use the formulas $V = lwh$ and $V = Bh$ to determine the volume of rectangular prisms. Justify why base area B and height h are multiplied to find the volume of a rectangular prism by breaking the prism into layers of unit cubes.	**Chapter 16: 16-4 & 16-5** • 16-4 Volume Formulas—pp. 368–369 (Use formulas to find the volumes of rectangular prisms; TE Develop Concepts: Arrays and Equations) • 16-5 Volume of Composite Figures—pp. 370–371 (Find the volume of a solid figure composed of rectangular prisms; TE Develop Concepts: How can you use a model to find missing lengths?)

DATA ANALYSIS

Grade 5 Content Standards	*Sadlier Math*, Grade 5
Display and interpret data; determine mean, median and range.	
5.4.1.1 Know and use the definitions of the mean, median and range of a set of data. Know how to use a spreadsheet to find the mean, median and range of a data set. Understand that the mean is a "leveling out" of data. *For example:* The set of numbers 1, 1, 4, 6 has mean 3. It can be leveled by taking one unit from the 4 and three units from the 6 and adding them to the 1s, making four 3s.	See Grade 6 **Chapter 16: 16-2 through 16-5** • 16-2 Measures of Center—pp. 360–361 (Determine measures of center and use them to summarize data sets; TE Develop Concepts: Review Decimal Division) • 16-3 Measures of Variation: Range and Interquartile Range—pp. 362–363 (Determine measures of variation and use them to summarize data sets; TE Develop Concepts: Exploring Measures of Center) • 16-4 Measure of Variation: Mean Absolute Deviation—pp. 366–367 (Determine mean absolute deviation; TE Develop Concepts: Making Line Plots with People) • 16-5 Analyze Data—pp. 368–369 (Identify clusters, gaps, and outliers and use them to analyze data; TE Develop Concepts: Analyze Statistical Pictures)
5.4.1.2 Create and analyze double-bar graphs and line graphs by applying understanding of whole numbers, fractions and decimals. Know how to create spreadsheet tables and graphs to display data.	Related content **Chapter 17: 17-1 through 17-6** • 17-1 Line Plots with Whole Numbers and Decimals—pp. 380–381 (Make and use line plots with whole numbers and decimals; TE Develop Concepts: Organizing Data) • 17-2 Line Plots with Fractions and Mixed Numbers—pp. 382–383 (Make and use line plots with fractions and mixed numbers; TE Develop Concepts: Desk Shuffleboard—collect data using fractions and mixed numbers) See also Grade 4 (line graphs) **Chapter 15: 15-5** • 15-5 Line Graphs—pp. 334–335 (Solve problems using customary units of measure; TE Develop Concepts: Graphing Data)