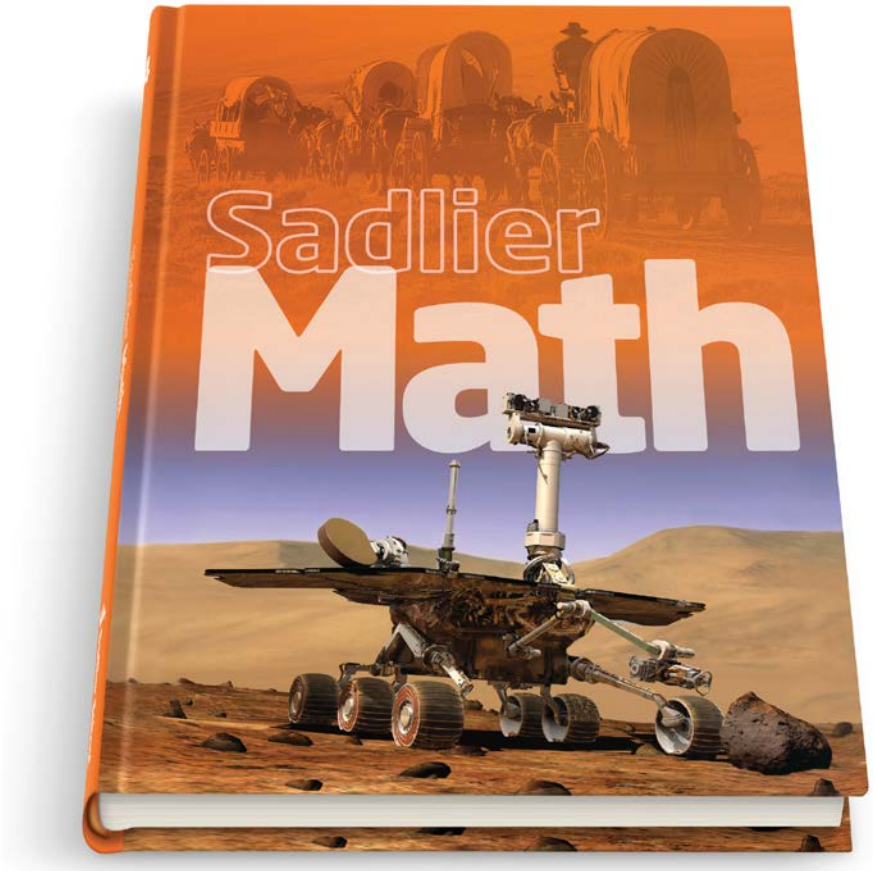
Sadlier Math™

Correlation to the Archdiocese of Cincinnati 2020 Graded Course of Study for Mathematics

Grade 4



Learn more at www.SadlierSchool.com/SadlierMath

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.OA.4.1 Use the four operations with whole numbers to solve problems.	
M.OA.4.1.1 Interpret a multiplication equation as a comparison, for example, interpret 35 = 5 x 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5.	**Chapter 4 Multiplication Concepts** 4-5 Multiply to Compare Numbers—pp. 78–79 **Chapter 5 Multiply by One-Digit Numbers** 5-5 Multiplicative and Additive Comparisons—pp. 98–99
M.OA.4.1.2 Represent verbal statements of multiplicative comparisons as multiplication equations.	**Chapter 4 Multiplication Concepts** 4-5 Multiply to Compare Numbers—pp. 78–79 **Chapter 5 Multiply by One-Digit Numbers** 5-5 Multiplicative and Additive Comparisons—pp. 98–99
M.OA.4.1.3 Multiply or divide to solve word problems involving multiplicative comparison, for example, by using drawings and equations with a symbol for the unknown number to represent the problem distinguishing multiplicative comparison from additive comparison.	**Chapter 4 Multiplication Concepts** 4-5 Multiply to Compare Numbers—pp. 78–79 **Chapter 5 Multiply by One-Digit Numbers** 5-5 Multiplicative and Additive Comparisons—pp. 98–99 **Chapter 7 Division Concepts** 7-6 Problem Solving: Work Backward—pp. 140–141 **Chapter 8 Divide by One-Digit Numbers** 8-8 Problem Solving: Use a Model—pp. 164–165
M.OA.4.1.4 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.	**Chapter 2 Addition** 2-1 Mathematical Expressions—pp. 24–25 2-2 Addition Properties—pp. 26–27 2-3 Estimate Sums—pp. 28–29 **Chapter 3 Subtraction** 3-1 Estimate Differences—pp. 46–47 3-6 Multistep Problems Using Addition and Subtraction—pp. 58–59 4-4 Estimate Products—pp. 76–77 **Chapter 7 Division Concepts** 7-3 Estimate Quotients—pp. 132–133 **Chapter 8 Divide by One-Digit Numbers** 8-1 One-Digit Quotients—pp. 148–149 8-3 Two-Digit Quotients—pp. 152–153
M.OA.4.1.5 Represent these problems using equations with a letter standing for the unknown quantity.	**Chapter 2 Addition** 2-1 Mathematical Expressions—pp. 24–25

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.OA.4.1 Use the four operations with whole numbers to solve problems.	
M.OA.4.1.6 Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	**Chapter 1 Place Value** 1-5 Round Whole Numbers—pp. 12–13 1-7 Problem Solving: Make a Table—pp. 16–17 **Chapter 2 Addition** 2-3 Estimate Sums—pp. 28–29 2-5 Add Millions—pp. 34–35 **Chapter 3 Subtraction** 3-1 Estimate Differences—pp. 46–47 **Chapter 4 Multiplication Concepts** 4-4 Estimate Products (rounding to estimate)—pp. 76–77 **Chapter 7 Division Concepts** 7-3 Estimate Quotients—pp. 132–133
M.OA.4.2 Gain familiarity with factors and multiples.	
M.OA.4.2.1 Find all factor pairs for a whole number in the range 1 – 100.	**Chapter 9 Factors and Multiples** 9-1 Factors—pp. 172–173 9-2 Factor Pairs—pp. 174–175 9-3 Prime and Composite Numbers—pp. 176–177 9-4 Multiples—pp. 180–181 9-5 Common Multiples—pp. 182–183
M.OA.4.2.2 Recognize that a whole number is a multiple of each of its factors.	**Chapter 9 Factors and Multiples** 9-4 Multiples—pp. 180–181
M.OA.4.2.3 Determine whether a given whole number in the range 1 – 100 is a multiple of a given one-digit number.	**Chapter 9 Factors and Multiples** 9-5 Common Multiples—pp. 182–183
M.OA.4.2.4 Determine whether a given whole number in the range 1 – 100 is a prime composite.	**Chapter 9 Factors and Multiples** 9-3 Prime and Composite Numbers—pp. 176–177

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.OA.4.3 Generate and analyze patterns.	
M.OA.4.3.1 Generate a number or shape pattern that follows a given rule.	**Chapter 7 Division Concepts** 7-5 Number Patterns—pp. 138–139 **Chapter 17 Polygons** 17-5 Shape Patterns —pp. 380–381
M.OA.4.3.2 Identify apparent features of the pattern that was not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the term appear to alternate between odd and even numbers.	**Chapter 7 Division Concepts** 7-5 Number Patterns—pp. 138–139 **Chapter 17 Polygons** 17-5 Shape Patterns —pp. 380–381

STANDARD 2 – NUMBERS AND OPERATIONS IN BASE TEN (NBT)

Grade 4 Standard. & Benchmark Description	*Sadlier Math*, Grade 4
M.NBT.4.1 Generalize place value understanding for multi–digit whole numbers.	
M.NBT.4.1.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right by applying concepts of place value, multiplication or division.	**Chapter 1 Place Value** 1-1 Thousands—pp. 2–3 1-2 What Is One Million?—pp. 4–5
M.NBT.4.1.2 Read and write multi-digit whole numbers using standard form, word form, and expanded from. Compare two multi-digit numbers based on meanings of the digits in each place, using ≥, =, and ≤ symbols to record the results of comparison. Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.	**Chapter 1 Place Value** 1-1 Thousands—pp. 2–3 1-2 What Is One Million?—pp. 4–5 1-3 Millions—pp. 6–7 1-4 Expanded Form—pp. 8–9 1-5 Round Whole Numbers—pp. 12–13 1-6 Compare and Order Whole Numbers—pp. 14–15
M.NBT.4.1.3 Use place value understanding to round multi-digit whole numbers to any place through 1,000,000.	**Chapter 1 Place Value** 1-5 Round Whole Numbers—pp. 12–13

STANDARD 2 – NUMBERS AND OPERATIONS IN BASE TEN (NBT)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.NBT.4.2 Use place value understanding and properties of operations to perform multi-digit arithmetic with whole numbers less than or equal to 1,000,000.	
M.NBT.4.2.1 Use place value understanding and properties of operations to perform multi-digit arithmetic with whole numbers less than or equal to 1,000,000.	**Chapter 2 Addition** 2-2 Addition Properties—pp. 26–27 2-4 Add Thousands—pp. 30–31 2-5 Add Millions—pp. 34–35 2-6 Three or More Addends—pp. 36–37
M.NBT.4.2.2 Fluently add and subtract multi-digit whole numbers using a standard algorithm.	**Chapter 2 Addition** 2-2 Addition Properties—pp. 26–27 2-4 Add Thousands—pp. 30–31 2-5 Add Millions—pp. 34–35 2-6 Three or More Addends—pp. 36–37 **Chapter 3 Subtraction** 3-2 Subtract with One Regrouping—pp. 48–49 3-3 Subtract with Two Regrouping—pp. 50–51 3-4 Subtract Greater Numbers—pp. 54–55 3-5 Zeros in Subtraction—pp. 56–57
M.NBT.4.2.3 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculations by using equations.	**Chapter 4 Multiplication Concepts** 4-1 Multiplication Properties—pp. 68–69 4-2 Use Place-Value Models—pp. 70–71 4-3 Multiply Tens, Hundreds, and Thousands—pp. 74–75 **Chapter 5 Multiply by One-Digit Numbers** 5-1 Multiply with Regrouping—pp. 88–89 5-2 Use Properties to Multiply by One-Digit Numbers—pp. 90–91 5-3 Use Area Models to Multiply by One-Digit Numbers—pp. 92–93 5-4 Multiply Three- and Four-Digit Numbers—pp. 96–97 5-5 Multiplicative and Additive Comparisons—pp. 98–99 **Chapter 6 Multiply by Two-Digit Numbers** 6-1 Use Area Models to Multiply by Two-Digit Numbers—pp. 108–109 6-2 Break Apart Numbers to Multiply—pp. 110–111 6-3 Multiply by Two-Digit Numbers: No Regrouping—pp. 114–115 6-4 Multiply by Two-Digit Numbers: Regrouping—pp. 116–117 6-5 Multiplication Patterns—pp. 118–119 *continued*

STANDARD 2 – NUMBERS AND OPERATIONS IN BASE TEN (NBT)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.NBT.4.2 Use place value understanding and properties of operations to perform multi-digit arithmetic with whole numbers less than or equal to 1,000,000.	
	Chapter 8 Divide by One-Digit Numbers 8-7 Multistep Problems Using Multiplication and Division—pp. 162–163
M.NBT.4.2.4 Find whole-number quotients and remainders with up to four digit dividends and one=digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays and/or area models.	**Chapter 7 Division Concepts** 7-1 Division Rules—pp. 128–129 7-2 Relate Multiplication and Division—pp. 130–131 7-4 Use Models to Divide—pp. 136–137 **Chapter 8 Divide by One-Digit Numbers** 8-1 One-Digit Quotients—pp. 148–149 8-2 Divisibility—pp. 150–151 8-3 Two-Digit Quotients—pp. 152–153 8-4 Zeros in Quotients—pp. 154–155 8-5 More Quotients—pp. 158–159 8-6 Order of Operations—pp. 160–161 8-7 Multistep Problems Using Multiplication and Division—pp. 162–163

STANDARD 3 – NUMBER AND OPERATIONS — FRACTIONS (NF)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.NF.4.1 Extend understanding of fraction equivalence and ordering limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100.	
M.NF.4.1.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even through the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	**Chapter 10 Fraction Concepts** 10-1 Fractions of a Set—pp. 192–193 10-2 Equivalent Fractions: Number Line Diagrams—pp. 194–195 10-3 Write Equivalent Fractions: Use Models—pp. 196–197 10-4 Write Equivalent Fractions: Use Multiplication and Division—pp. 198–199 10-5 Fractions: Lowest Terms—pp. 200–201 10-6 Compare Fractions: Use Benchmarks—pp. 204–205

STANDARD 3 – NUMBER AND OPERATIONS — FRACTIONS (NF)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.NF.4.1 Extend understanding of fraction equivalence and ordering limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100.	
M.NF.4.1.2 Compare two fractions with different numerators and different denominators, for examples, by creating common denominators a numerators, or by comparing to a benchmark fraction such as ½.	**Chapter 10 Fraction Concepts** 10-6 Compare Fractions: Use Benchmarks—pp. 204–205 10-7 Compare Fractions with the Same Denominator—pp. 206–207 10-8 Compare Fractions—pp. 208–209 10-9 Mixed Numbers—pp. 210–211 10-10 Compare Mixed Numbers—pp. 212–213
M.NF.4.1.3 Recognize that comparisons of two fractions are valued only when the two fractions refer to the same whole.	**Chapter 10 Fraction Concepts** 10-7 Compare Fractions with the Same Denominator—pp. 206–207 10-8 Compare Fractions—pp. 208–209 10-10 Compare Mixed Numbers—pp. 212–213
M.NF.4.1.4 Record the results of comparisons with symbols ≥, =, or ≤, and justify the conclusion, for example, by using a visual fraction model.	**Chapter 10 Fraction Concepts** 10-6 Compare Fractions: Use Benchmarks—pp. 204–205 10-7 Compare Fractions with the Same Denominator—pp. 206–207 10-8 Compare Fractions—pp. 208–209 10-10 Compare Mixed Numbers—pp. 212–213
M.NF.4.2 Build fractions from unit fractions by applying and extending previous understanding of operations on whole number limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100 (Fractions need not be simplified.)	
M.NF.4.2.1 Understand a fraction a/b with $a \geq 1$ as a sum of fractions $1/b$.	**Chapter 11 Fractions: Addition and Subtraction** 11-1 Use Models to Add Fractions—pp. 224–225 11-2 Add Fractions: Like Denominators—pp. 226–227 11-3 Decompose Fractions as Sums of Unit Fractions—pp. 228–229
M.NF.4.2.2 Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	**Chapter 11 Fractions: Addition and Subtraction** 11-1 Use Models to Add Fractions—pp. 224–225 11-2 Add Fractions: Like Denominators—pp. 226–227 11-3 Decompose Fractions as Sums of Unit Fractions—pp. 228–229 11-4 Use Models to Subtract Fractions—pp. 230–231 11-5 Subtract Fractions: Like Denominators—pp. 232–233

STANDARD 3 – NUMBER AND OPERATIONS — FRACTIONS (NF)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.NF.4.2 Build fractions from unit fractions by applying and extending previous understanding of operations on whole number limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100 (Fractions need not be simplified.)	
M.NF.4.2.3 Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation.	**Chapter 11 Fractions: Addition and Subtraction** 11-2 Add Fractions: Like Denominators—pp. 226–227 11-3 Decompose Fractions as Sums of Unit Fractions—pp. 228–229 11-4 Use Models to Subtract Fractions—pp. 230–231
M.NF.4.2.4 Justify decompositions, for example, by using a visual fraction model. Examples: 3/8 = 1/8 + 1/8 + 1/8, 3/8 = 1/8 + 2/8, 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.	**Chapter 11 Fractions: Addition and Subtraction** 11-2 Add Fractions: Like Denominators—pp. 226–227 11-3 Decompose Fractions as Sums of Unit Fractions—pp. 228–229 11-4 Use Models to Subtract Fractions—pp. 230–231
M.NF.4.2.5 Add and subtract mixed numbers with like denominators, for example, by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	**Chapter 10 Fraction Concepts** 10-9 Mixed Numbers—pp. 210–211 **Chapter 11 Fractions: Addition and Subtraction** 11-6 Write Mixed Numbers as Equivalent Fractions—pp. 236–237 11-7 Add Mixed Numbers: Like Denominators—pp. 238–239 11-8 Subtract Mixed Numbers: Like Denominators—pp. 240–241
M.NF.4.2.6 Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators. For example, by using visual fraction models and equations to represent the problem.	**Chapter 11 Fractions: Addition and Subtraction** 11-1 Use Models to Add Fractions—pp. 224–225 11-2 Add Fractions: Like Denominators—pp. 226–227 11-3 Decompose Fractions as Sums of Unit Fractions—pp. 228–229 11-4 Use Models to Subtract Fractions—pp. 230–231 11-5 Subtract Fractions: Like Denominators—pp. 232–233
M.NF.4.2.7 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	**Chapter 12 Fractions: Multiply by a Whole Number** 12-1 Add Unit Fractions to Multiply—pp. 250–251 12-2 Model Multiplying a Unit Fraction and a Whole Number—pp. 252–253 12-3 Multiply a Unit Fraction and a Whole Number—pp. 254–255 12-4 Model Multiplying a Fraction and a Whole Number—pp. 258–259

STANDARD 3 – NUMBER AND OPERATIONS — FRACTIONS (NF)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.NF.4.2 Build fractions from unit fractions by applying and extending previous understanding of operations on whole number limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100 (Fractions need not be simplified.)	
M.NF.4.2.8 Understand a fraction *a*/*b* as a multiple of 1/*b*.	**Chapter 12 Fractions: Multiply by a Whole Number** 12-1 Add Unit Fractions to Multiply—pp. 250–251 12-2 Model Multiplying a Unit Fraction and a Whole Number—pp. 252–253 12-3 Multiply a Unit Fraction and a Whole Number—pp. 254–255 12-4 Model Multiplying a Fraction and a Whole Number—pp. 258–259
M.NF.4.2.9 Understand a multiple of *a*/*b* and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 x (2/5) as 6 x (1/5), recognizing this product as 6/5. (In general, *n* x (*a*/*b*) = (*n* x *a*)/*b*).	**Chapter 12 Fractions: Multiply by a Whole Number** 12-1 Add Unit Fractions to Multiply—pp. 250–251 12-2 Model Multiplying a Unit Fraction and a Whole Number—pp. 252–253 12-3 Multiply a Unit Fraction and a Whole Number—pp. 254–255 12-4 Model Multiplying a Fraction and a Whole Number—pp. 258–259 12-5 Multiply a Fraction and a Whole Number—pp. 260–261
M.NF.4.2.10 Solve word problems involving multiplication of a fraction by a whole number, for example, by using visual fraction models and equations to represent the problem.	**Chapter 12 Fractions: Multiply by a Whole Number** 12-1 Add Unit Fractions to Multiply—pp. 250–251 12-2 Model Multiplying a Unit Fraction and a Whole Number—pp. 252–253 12-3 Multiply a Unit Fraction and a Whole Number—pp. 254–255 12-4 Model Multiplying a Fraction and a Whole Number—pp. 258–259 12-5 Multiply a Fraction and a Whole Number—pp. 260–261 12-6 Represent Situations Involving Multiplying a Fraction and a Whole Number—pp. 262–263 12-7 Problem Solving: Write an Equation—pp. 264–265

STANDARD 3 – NUMBER AND OPERATIONS — FRACTIONS (NF)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.NF.4.3 Understand decimal notation for fractions, and compare decimal fractions.	
M.NF.4.3.1 Express a fraction with denominator 10 as an equivalent fraction with denominator 100. **M.NF.4.3.2** Use this technique to add two fractions with respective denominator 10 and 100. For example, express 3/100, and add 3/10 + 4/100 = 34/100.	**Chapter 13 Fractions and Decimals** 13-1 Equivalent Fractions: Rename Tenths as Hundredths—pp. 272–273 13-2 Add and Subtract Fractions with Denominators of 10 and 100—pp. 274–275 13-3 Tenths and Hundredths as Fractions and Decimals—pp. 276–277 13-4 Decimals Greater Than One—pp. 278–279 13-5 Decimal Place value—pp. 280–281
M.NF.4.3.3 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.	**Chapter 13 Fractions and Decimals** 13-3 Tenths and Hundredths as Fractions and Decimals—pp. 276–277 13-4 Decimals Greater Than One—pp. 278–279 13-5 Decimal Place value—pp. 280–281
M.NF.4.3.4 Compare two decimals to hundredths by reasoning about their size.	**Chapter 13 Fractions and Decimals** 13-6 Compare Decimals with Models and Symbols—pp. 284–285 13-7 Order Decimals—pp. 286–287
M.NF.4.3.5 Recognize that comparisons are valued only when the two decimals refer to the same whole.	**Chapter 13 Fractions and Decimals** 13-6 Compare Decimals with Models and Symbols—pp. 284–285 13-7 Order Decimals—pp. 286–287
M.NF.4.3.6 Record the results of comparisons with symbols ≥, =, or ≤, and justify the conclusions. For example, by using a visual model.	**Chapter 13 Fractions and Decimals** 13-6 Compare Decimals with Models and Symbols—pp. 284–285 13-7 Order Decimals—pp. 286–287

STANDARD 4 – MEASUREMENT AND DATA (MD)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.MD.4.1 Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	
M.MD.4.1.1 Know relative sizes of measurement units within one system of units including kilometers, meters, centimeter, kilogram, gram, pound, ounce, liter, millimeter, hour, minute, second.	**Chapter 14 Measurement** 14-1 Measure with Inches—pp. 296–297 14-2 Customary Units of Length—pp. 298–299 14-3 Customary Units of Capacity—pp. 300–301 14-4 Customary Units of Weight—pp. 302–303 14-5 Operations with Customary Units—pp. 304–305 14-6 Metric Units of Length—pp. 308–311 14-7 Metric Units of Capacity—pp. 310–313 14-8 Metric Units of Mass—pp. 312–313 14-9 Operations with Metric Units—pp. 314–315 14-10 Problem Solving: Make a Table—pp. 316–317
M.MD.4.1.2 Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit.	**Chapter 14 Measurement** 14-1 Measure with Inches—pp. 296–297 14-2 Customary Units of Length—pp. 298–299 14-3 Customary Units of Capacity—pp. 300–301 14-4 Customary Units of Weight—pp. 302–303 14-5 Operations with Customary Units—pp. 304–305 14-6 Metric Units of Length—pp. 308–311 14-7 Metric Units of Capacity—pp. 310–313 14-8 Metric Units of Mass—pp. 312–313 14-9 Operations with Metric Units—pp. 314–315 14-10 Problem Solving: Make a Table—pp. 316–317
M.MD.4.1.3 Record measurement equivalents in a two-column table. For example, know that 1 ft. is 12 times as long as 1 inch. Express the length of a 4 ft. snake as 48 inches.	**Chapter 14 Measurement** 14-1 Measure with Inches—pp. 296–297 14-2 Customary Units of Length—pp. 298–299 14-3 Customary Units of Capacity—pp. 300–301 14-4 Customary Units of Weight—pp. 302–303 14-5 Operations with Customary Units—pp. 304–305 14-6 Metric Units of Length—pp. 308–311 14-7 Metric Units of Capacity—pp. 310–313 14-8 Metric Units of Mass—pp. 312–313 14-9 Operations with Metric Units—pp. 314–315 14-10 Problem Solving: Make a Table—pp. 316–317
M.MD.4.1.4 Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36) etc.	**Chapter 14 Measurement** 14-3 Customary Units of Capacity—pp. 300–301 14-4 Customary Units of Weight—pp. 302–303 14-5 Operations with Customary Units—pp. 304–305 14-7 Metric Units of Capacity—pp. 310–313

continued

STANDARD 4 – MEASUREMENT AND DATA (MD)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.MD.4.1 Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	
	14-8 Metric Units of Mass—pp. 312–313 14-9 Operations with Metric Units—pp. 314–315 14-10 Problem Solving: Make a Table—pp. 316–317
M.MD.4.1.5 Use the four operations to solve word problems involving distances intervals of time, liquid volumes, masses of objects, and money. **M.MD.4.1.6** Include problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	**Chapter 14 Measurement** 14-1 Measure with Inches—pp. 296–297 14-2 Customary Units of Length—pp. 298–299 14-3 Customary Units of Capacity—pp. 300–301 14-4 Customary Units of Weight—pp. 302–303 14-5 Operations with Customary Units—pp. 304–305 14-6 Metric Units of Length—pp. 308–311 14-7 Metric Units of Capacity—pp. 310–313 14-8 Metric Units of Mass—pp. 312–313 14-9 Operations with Metric Units—pp. 314–315 14-10 Problem Solving: Make a Table—pp. 316–317 **Chapter 15 Measurement and Data** 15-1 Represent Measures on a Number Line—pp. 324–325 15-2 Use Multiplication to Rename Measures—pp. 326–327 15-3 Elapsed Time—pp. 328–329
M.MD.4.1.7 Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	**Chapter 14 Measurement** 14-1 Measure with Inches—pp. 296–297 14-6 Metric Units of Length—pp. 308–311 **Chapter 15 Measurement and Data** 15-1 Represent Measures on a Number Line—pp. 324–325
M.MD.4.1.8 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.	**Chapter 17 Polygons** 17-6 Use Perimeter Formulas—pp. 382–383 17-7 Use Area Formulas—pp. 384–385

STANDARD 4 – MEASUREMENT AND DATA (MD)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.MD.4.2 Represent and interpret data.	
M.MD.4.2.1 Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛).	**Chapter 15 Measurement and Data** 15-6 Line Plots—pp. 336–337 15-7 Surveys and Line Plots—pp. 338–339
M.MD.4.2.2 Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.	**Chapter 15 Measurement and Data** 15-6 Line Plots—pp. 336–337 15-7 Surveys and Line Plots—pp. 338–339
M.MD.4.3 Geometric measurement: understand concepts of angle and measurement angles.	
M.MD.4.3.1 Recognize angles as geometric shapes that are formed whenever two rays share a common endpoint, and understand concepts of angle measurement.	**Chapter 16 Lines and Angles** 16-1 Points, Lines, Line Segments, Rays and Angles—pp. 350–351 16-2 Angle Measure—pp. 352–353
M.MD.4.3.2 Understand an angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where two rays intersect the circle.	**Chapter 16 Lines and Angles** 16-2 Angle Measure—pp. 352–353
M.MD.4.3.3 An angle that turns through 1/360 of a circle is called "one-degree angle", and can be used to measure angles.	**Chapter 16 Lines and Angles** 16-2 Angle Measure—pp. 352–353
M.MD.4.3.4 Understand an angle that turns through *n* one-degree angles is said to have an angle measurement of *n* degree.	**Chapter 16 Lines and Angles** 16-1 Points, Lines, Line Segments, Rays and Angles—pp. 350–351 16-2 Angle Measure—pp. 352–353
M.MD.4.3.5 Measure angles in whole number degrees using a protractor. Sketch angles of specified measure.	**Chapter 16 Lines and Angles** 16-1 Points, Lines, Line Segments, Rays and Angles—pp. 350–351 16-2 Angle Measure—pp. 352–353 16-3 Measure Angles—pp. 356–357

STANDARD 4 – MEASUREMENT AND DATA (MD)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.MD.4.3 Geometric measurement: understand concepts of angle and measurement angles.	
M.MD.4.3.6 Recognize angle measure as additive.	**Chapter 16 Lines and Angles** 16-4 Unknown Angle Measures—pp. 358–359
M.MD.4.3.7 When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts.	**Chapter 16 Lines and Angles** 16-4 Unknown Angle Measures—pp. 358–359
M.MD.4.3.8 Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems. For example, by using an equation with a symbol for the unknown angle measure.	**Chapter 16 Lines and Angles** 16-4 Unknown Angle Measures—pp. 358–359

STANDARD 5 – GEOMETRY (G)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.G.4.1 Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	
M.G.4.1.1 Draw points, lines, line segments, rays, angles (right, acute and obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	**Chapter 16 Lines and Angles** 16-1 Points, Lines, Line Segments, Rays and Angles—pp. 350–351 16-2 Angle Measure—pp. 352–353 16-3 Measure Angles—pp. 356–357 16-4 Unknown Angle Measures—pp. 358–359 16-5 Parallel and Perpendicular Lines—pp. 360–361
M.G.4.1.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	**Chapter 17 Polygons** 17-1 Polygons—pp. 370–371 17-2 Quadrilaterals—pp. 372–373 17-3 Triangles—pp. 374–375

STANDARD 5 – GEOMETRY (G)

Grade 4 Standard & Benchmark Description	*Sadlier Math*, Grade 4
M.G.4.1 Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	
M.G.4.1.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	**Chapter 17 Polygons** 17-4 Symmetry—pp. 376–377