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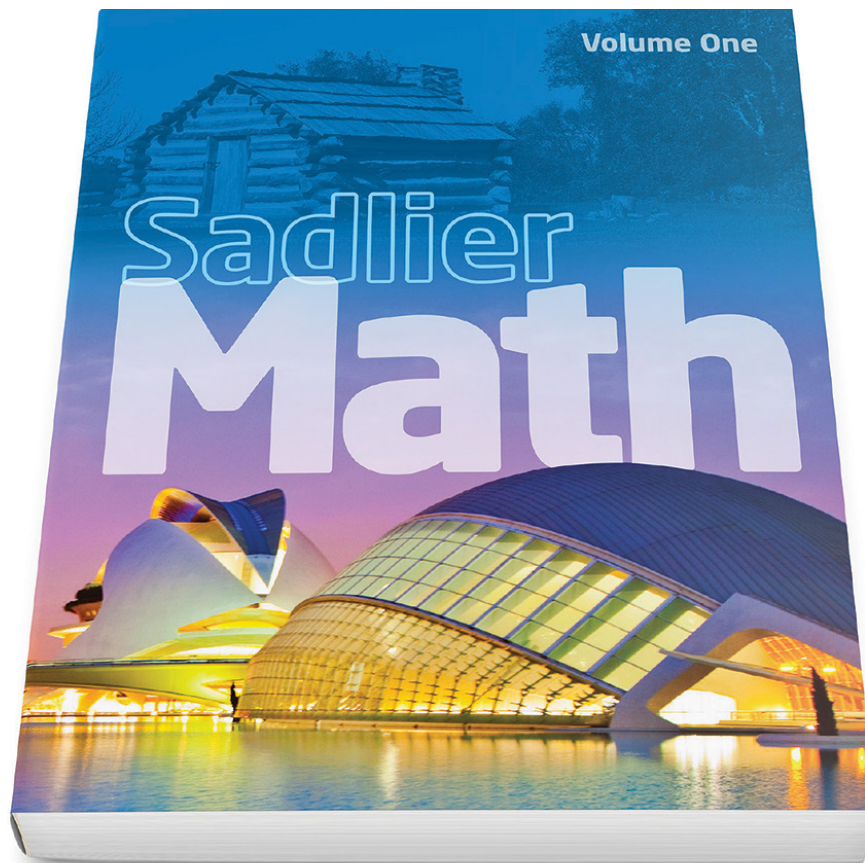
Correlation to the Archdiocese of Cincinnati
2020 Graded Course of Study for Mathematics

Grade 2

Volume One

Sadlier Math

Learn more at www.SadlierSchool.com/SadlierMath

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2

M.OA.2.1 Represent and solve problems involving addition and subtraction.

M.OA.2.1.1 Use addition and subtraction within 100 to solve one – and two – step word problems involving situations of adding to, taking from, putting together, taking apart and comparing, with unknowns in all positions.	**Chapter 1 Addition Within 20** 1-1 Addition Concepts—pp. 3–6 1-2 Put Together—pp. 7–10 1-7 Three Addends—pp. 29–32 1-9 Solve for Unknown Addends—pp. 39–42 **Chapter 2 Subtraction Within 20** 2-1 Subtraction Concepts—pp. 53–56 2-2 Take Apart—pp. 57–60 2-3 Subtract to Compare—pp. 61–64 **2-10 Solve for Unknowns—pp. 91–94** 2-12 Problem Solving: Work Backward—pp. 99–104 **Chapter 4 Addition: Two-Digit Numbers** 4-8 Three Addends—pp. 175–178 4-9 Four Addends—pp. 179–182
M.OA.2.1.2 Use drawings and equations with a symbol for the unknown number (within 100) to represent the problem.	**Chapter 1 Addition Within 20** 1-1 Addition Concepts—pp. 3–6 1-2 Put Together—pp. 7–10 1-7 Three Addends—pp. 29–32 1-9 Solve for Unknown Addends—pp. 39–42 **Chapter 2 Subtraction Within 20** 2-1 Subtraction Concepts—pp. 53–56 2-2 Take Apart—pp. 57–60 2-3 Subtract to Compare—pp. 61–64 **2-10 Solve for Unknowns—pp. 91–94** 2-12 Problem Solving: Work Backward—pp. 99–104 **Chapter 4 Addition: Two-Digit Numbers** 4-8 Three Addends—pp. 175–178 4-9 Four Addends—pp. 179–182

M.OA.2.2 Add and subtract within 20.

M.OA.2.2.1 Fluently add and subtract within 20 using mental strategies. Know from memory all sums of two one-digit numbers by the end of Grade 2.	**Chapter 1 Addition Within 20** 1-3 Related Addition Facts—pp. 11–14 1-4 Count On to Add—pp. 15–18 1-5 Doubles and Near Doubles—pp. 19–22 1-6 Make 10 to Add—pp. 23–26 1-7 Three Addends—pp. 29–32 *continued*

STANDARD 1 – OPERATION AND ALGEBRAIC THINKING (OA)

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2

M.OA.2.2 Add and subtract within 20.

	1-8 Problem Solving: The Four-Step Process—pp. 33–38 1-9 Solve for Unknown Addends—pp. 39–42 1-10 Patterns in Addition—pp. 43–46 **Chapter 2 Subtraction Within 20** 2-2 Take Apart—pp. 57–60 2-4 Count On to Subtract—pp. 65–68 2-5 Related Subtraction Facts—pp. 69–72 2-6 Relate Addition and Subtraction—pp. 73–76 2-7 Fact Families—pp. 77–80 2-8 Think Addition to Subtract—pp. 83–86 2-9 Use Addition to Check—pp. 87–90 2-10 Solve for Unknowns—pp. 91–94 2-11 Make 10 to Subtract—pp. 95–98 2-12 Problem Solving: Work Backward—pp. 99–104

M.OA.2.3 Work with equal groups of objects to gain foundations from multiplication.

M.OA.2.3.1 Determine whether a group of objects (up to 20) has an odd or even number of numbers. For examples, by pairing objects or counting them by 2's.	**Chapter 10 Foundations for Multiplication** 10-1 Odd and Even Numbers—pp. 429–432 10-2 Represent Even Numbers—pp. 433–436
M.OA.2.3.2 Write an equation to express an even number as a sum of two equal parts.	**Chapter 10 Foundations for Multiplication** 10-2 Represent Even Numbers—pp. 433–436 10-3 Arrays: Repeated Addition—pp. 439–442
M.OA.2.3.3 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns.	**Chapter 10 Foundations for Multiplication** 10-3 Arrays: Repeated Addition—pp. 439–442
M.OA.2.3.4 Write an equation to express the total as a sum of equal addends.	**Chapter 10 Foundations for Multiplication** 10-3 Arrays: Repeated Addition—pp. 439–442 10-4 Arrays: Show the Same Number—pp. 443–446 10-5 Problem Solving: Draw a Picture—pp. 447–452

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

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2
M.NBT.2.1 Understand place value.	
M.NBT.2.1.2 Understand that the three digits of a three digit number represent amounts of hundreds, tens, and ones. For example, 706 equals 7 hundreds, 0 tens and 6 ones.	**Chapter 7 Place Value to 1000** 7-1 Hundreds—pp. 299-302
M.NBT.2.1.3 100 can be thought of as a bundle of tens – called a "hundred"	**Chapter 7 Place Value to 1000** 7-1 Hundreds—pp. 299-302
M.NBT.2.1.4 The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	**Chapter 7 Place Value to 1000** 7-1 Hundreds—pp. 299-302
M.NBT.2.1.5 Count forwards and backwards within 1000; skip count by 5s, 10s and 100s.	**Chapter 3 Place Value to 100** 3-5 Counting Patterns by 2s, 5s, and 10s—pp. 129-132 **Chapter 7 Place Value to 1000** 7-5 Skip Count Within 1000—pp. 317-320
M.NBT.2.1.6 Count forwards and backwards within 1000; skip count by 5s, 10s and 100s.	**Chapter 3 Place Value to 100** 3-5 Counting Patterns by 2s, 5s, and 10s—pp. 129-132 **Chapter 7 Place Value to 1000** 7-5 Skip Count Within 1000—pp. 317-320
M.NBT.2.1.7 Read and write numbers to 1000 using base-ten numerals, number names, and expanded forms.	**Chapter 3 Place Value to 100** 3-1 Tens and Ones—pp. 111-114 3-2 Expanded Form—pp. 115-118 **Chapter 7 Place Value to 1000** 7-2 Hundreds, Tens and Ones—pp. 307-310 7-3 Place Value in Three-Digit Numbers—pp. 307-310 7-4 Expanded Form with Hundreds, Tens, and Ones—pp. 311-314
M.NBT.2.1.8 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using ≥, =, and ≤ symbols, to record the results of comparison.	**Chapter 7 Place Value to 1000** 7-6 Compare Numbers Within 1000—pp. 321-324 7-7 Order Numbers within 1000—pp. 325-328

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

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2

M.NBT.2.2 Use place value understanding and properties of operations to add and subtract.

M.NBT.2.2.1 Fluently add and subtract within 100 using strategies based on place value, "properties of operations" and/or the relationship between addition and subtraction.

Chapter 1 Addition Within 20
1-1 Addition Concepts—pp. 3-6
1-2 Put Together—pp. 7-10
1-3 Related Addition Facts—pp. 11-14
1-4 Count On to Add—pp. 15-18
1-5 Doubles and Near Doubles—pp. 19-22
1-6 Make 10 to Add—pp. 23-26
1-7 Three Addends—pp. 29-32
1-8 Problems Solving: The Four-Step Process—pp. 33-38
1-9 Solve for Unknown Addends—pp. 39-42
1-10 Patterns in Addition—pp. 43-46

Chapter 2 Subtraction Within 20
2-1 Subtraction Concepts—pp. 53–56
2-2 Take Apart—pp. 57–60
2-3 Subtract to Compare—pp. 61–64
2-4 Count On to Subtract—pp. 65–68
2-5 Related Subtraction Facts—pp. 69–72
2-6 Relate Addition and Subtraction—pp. 73–76
2-7 Fact Families—pp. 77–80
2-8 Think Addition to Subtract—pp. 83–86
2-9 Use Addition to Check—pp. 87–90
2-10 Solve for Unknowns—pp. 91–94
2-11 Make 10 to Subtract—pp. 95–98
2-12 Problem Solving: Work Backward—pp. 99–104

Chapter 4 Addition: Two-Digit Numbers
4-1 Use Models: Add Tens and Ones—pp. 145–148
4-2 Add Tens and Ones—pp. 149–152
4-3 Regroup Ones as Tens—pp. 155–158
4-4 Use Models: Two-Digit Addition with Regrouping—pp. 159–162
4-5 Two-Digit Addition with Regrouping—pp. 163–166
4-6 Rewrite Two-Digit Addition—pp. 167–170
4-7 Break Apart to Add—pp. 171–174
4-8 Three Addends—pp. 175–178
4-9 Four Addends—pp. 179–182
4-10 Problem Solving: Find Needed Information—pp. 183–188

continued

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

Grade 2 Standard & Benchmark Description	Sadlier Math, Grade 2

M.NBT.2.2 Use place value understanding and properties of operations to add and subtract.

	Chapter 5 Subtractions: Two-Digit Numbers 5-1 Use Models: Subtract Tens and Ones—pp. 195–198 5-2 Subtract Tens and Ones—pp. 199–202 5-3 Regroup Tens as Ones—pp. 205–208 5-4 Use Models: Two-Digit Subtraction with Regrouping—pp. 209–212 5-5 Two-Digit Subtraction with Regrouping—pp. 213–216 5-6 Rewrite Two-Digit Subtraction—pp. 217–220 5-7 Break Apart to Subtract—pp. 221–224 5-8 Add to Check—pp. 225–228 5-9 Problem Solving: Write and Solve an Equation—pp. 229–234
M.NBT.2.2.2 Add up to four two-digit numbers using strategies based on place value and "properties of operations".	**Chapter 4 Addition: Two-Digit Numbers** 4-1 Use Models: Add Tens and Ones—pp. 145–148 4-2 Add Tens and Ones—pp. 149–152 4-3 Regroup Ones as Tens—pp. 155–158 4-4 Use Models: Two-Digit Addition with Regrouping—pp. 159–162 4-5 Two-Digit Addition with Regrouping—pp. 163–166 4-6 Rewrite Two-Digit Addition—pp. 167–170 4-7 Break Apart to Add—pp. 171–174 4-8 Three Addends—pp. 175–178 4-9 Four Addends—pp. 179–182 4-10 Problem Solving: Find Needed Information—pp. 183–188
M.NBT.2.2.3 Add and subtract within 1000 using concrete models or drawings and strategies based on place value, "properties of operations, and/or the relationship between addition and subtraction.	**Chapter 1 Addition Within 20** 1-1 Addition Concepts—pp. 3-6 1-2 Put Together—pp. 7-10 1-3 Related Addition Facts—pp. 11-14 1-4 Count On to Add—pp. 15-18 1-5 Doubles and Near Doubles—pp. 19-22 1-6 Make 10 to Add—pp. 23-26 1-7 Three Addends—pp. 29-32 1-8 Problems Solving: The Four-Step Process—pp. 33-38 1-9 Solve for Unknown Addends—pp. 39-42 1-10 Patterns in Addition—pp. 43-46 *continued*

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

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2

M.NBT.2.2 Use place value understanding and properties of operations to add and subtract.

	Chapter 2 Subtraction Within 20
	  2-1 Subtraction Concepts—pp. 53–56
	  2-2 Take Apart—pp. 57–60
	  2-3 Subtract to Compare—pp. 61–64
	  2-4 Count On to Subtract—pp. 65–68
	  2-5 Related Subtraction Facts—pp. 69–72
	  2-6 Relate Addition and Subtraction—pp. 73–76
	  2-7 Fact Families—pp. 77–80
	  2-8 Think Addition to Subtract—pp. 83–86
	  2-9 Use Addition to Check—pp. 87–90
	  2-10 Solve for Unknowns—pp. 91–94
	  2-11 Make 10 to Subtract—pp. 95–98

M.NBT.2.2.4 Record the prior benchmark strategy with a written numerical method (drawings and, when appropriate, equations) and explain the reasoning used.
 	
M.NBT.2.2.5 Understand that in adding or subtraction three-digit numbers, hundreds are added or subtracted from hundreds, tens are added or subtracted from tens, ones are added or subtracted from ones and sometimes it is necessary to compose or decompose tens or hundreds.
	Chapter 1 Addition Within 20
	  1-1 Addition Concepts—pp. 3-6
	  1-2 Put Together—pp. 7-10
	  1-3 Related Addition Facts—pp. 11-14
	  1-4 Count On to Add—pp. 15-18
	  1-5 Doubles and Near Doubles—pp. 19-22
	  1-6 Make 10 to Add—pp. 23-26
	  1-7 Three Addends—pp. 29-32
	  1-8 Problems Solving: The Four-Step Process—pp. 33-38
	  1-9 Solve for Unknown Addends—pp. 39-42
	  1-10 Patterns in Addition—pp. 43-46
	
	Chapter 2 Subtraction Within 20
	  2-1 Subtraction Concepts—pp. 53–56
	  2-2 Take Apart—pp. 57–60
	  2-3 Subtract to Compare—pp. 61–64
	  2-4 Count On to Subtract—pp. 65–68
	  2-5 Related Subtraction Facts—pp. 69–72
	  2-6 Relate Addition and Subtraction—pp. 73–76
	  2-7 Fact Families—pp. 77–80
	  2-8 Think Addition to Subtract—pp. 83–86
	  2-9 Use Addition to Check—pp. 87–90
	  2-10 Solve for Unknowns—pp. 91–94
	  2-11 Make 10 to Subtract—pp. 95–98

M.NBT.2.2.6 Mentally add 10 or 100 to a given number 100 – 900, and mentally subtract 10 or 100 from a given number 100 – 900.	**Chapter 8 Addition: Three-Digit Numbers**
	  8-1 Mental Math: Add 1, 10, or 100—pp. 341–344
	Chapter 9 Subtraction: Three-Digit Numbers
	  9-1 Mental Math: Subtract 1, 10, or 100—pp. 383–386

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

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2

M.NBT.2.2 Use place value understanding and properties of operations to add and subtract.

M.NBT.2.2.7 Explain why addition and subtraction strategies work, using place value and the properties of operations.	**Chapter 5 Subtractions: Two-Digit Numbers** 5-7 Break Apart to Subtract—pp. 221–224 **Chapter 8 Addition: Three-Digit Numbers** 8-2 Add Hundreds, Tens and Ones—pp. 345–348 8-3 Add: Regroup Ones as Tens—pp. 349–352 8-4 Regroup Tens as Hundreds Using Models—pp. 353–356 8-5 Add: Regroup Tens as Hundreds—pp. 357–360 8-6 Add: Regroup Twice—pp. 363–366 8-7 Problem Solving: Make an Organized List—pp. 367–372 8-8 Use Properties to Add—pp. 373–376 **Chapter 9 Subtraction: Three-Digit Numbers** 9-2 Subtract Hundreds, Tens and Ones—pp. 387–390 9-3 Subtract: Regroup Tens as Ones—pp. 391–394 9-4 Regroup Hundreds as Tens Using Models—pp. 395–398 9-5 Subtract: Regroup Hundreds as Tens—pp. 399–402 9-6 Subtract: Regroup Twice—pp. 405–408 9-7 Subtract: Regroup with Zeros—pp. 409–412 9-8 Problem Solving: More Than One Way—pp. 413–418 9-9 Use Addition to Check Subtraction: Three-Digit Numbers—pp. 419–422

STANDARD 3 – MEASUREMENT AND DATA (MD)

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2

M.MD.2.1 Measure and estimate lengths in standard units.

M.MD.2.1.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	**Chapter 6 Measurement** 6-1 Inches—pp. 241–244 6-2 Feet and Yards—pp. 245–248 6-3 Customary: Choose Tools and Units of Measure—pp. 249–252 6-4 Centimeters—pp. 253–256 6-5 Meters—pp. 257–260 6-6 Metric: Choose Tools and Units of Measure—pp. 261–264
M.MD.2.1.2 Measure the length of an object twice, using length units of different lengths, for the two measurements; describe how the two measurements relate to the size of the unit chosen.	**Chapter 6 Measurement** 6-7 Measure Using Different Units—pp. 267–270
M.MD.2.1.3 Estimate lengths using units of inches, feet, centimeters and meters.	**Chapter 6 Measurement** 6-1 Inches—pp. 241–244 6-2 Feet and Yards—pp. 245–248 6-4 Centimeters—pp. 253–256 6-5 Meters—pp. 257–260
M.MD.2.1.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	**Chapter 6 Measurement** 6-8 Compare Lengths—pp. 271–274 6-9 Add and Subtract Lengths—pp. 275–278

M.MD.2.2 Relate addition and subtraction to length.

M.MD.2.2.1 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same whole number units. For example, by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	**Chapter 6 Measurement** 6-9 Add and Subtract Lengths—pp. 275–278 6-10 Problem Solving: More Than One Way—pp. 279–284

STANDARD 3 – MEASUREMENT AND DATA (MD)

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2
M.MD.2.2 Relate addition and subtraction to length.	
M.MD.2.2.2 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2,...., and represent whole – number sums and differences within 100 on a number line diagram.	**Chapter 6 Measurement** 6-11 Represent Whole Numbers on a Line Diagram—pp. 285–288 6-12 Add and Subtract on a Number Line Diagram—pp. 289–292
M.MD.2.3 Work with Time and Money	
M.MD.2.3.1 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	**Chapter 12 Money and Time** 12-9 Hour and Half Hour—pp. 531–534 12-10 Five Minutes—pp. 535–538 12-11 A.M. and P.M.—pp. 539–542 12-12 Problem Solving: Work Backward—pp. 543–548
M.MD.2.3.2 Identify nickels and quarters by name and value.	**Chapter 12 Money and Time** 12-1 Pennies, Nickels, and Dimes—pp. 497–500
M.MD.2.3.3 Find the value of a collection of quarters, dimes, nickels and pennies.	**Chapter 12 Money and Time** 12-1 Pennies, Nickels, and Dimes—pp. 497–500 12-2 Quarters—pp. 501–504 12-3 Equal Amounts—pp. 505–508 12-4 Compare Money—pp. 509–512 12-5 Make Change—pp. 513–516
M.MD.2.3.4 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.	**Chapter 12 Money and Time** 12-3 Equal Amounts—pp. 505–508 12-4 Compare Money—pp. 509–512 12-5 Make Change—pp. 513–516 12-6 Add and Subtract Money—pp. 517–520 12-7 One Dollar—pp. 521–524 12-8 Paper Money—pp. 525–528
M.MD.2.4 Represent and interpret data.	
M.MD.2.4.1 Generate measurement data by measuring lengths of several objects to the nearest whole unit or by making repeated measurements of the same object.	**Chapter 6 Measurement** 6-7 Measure Using Different Units—pp. 267–270 **Chapter 11 Data and Graphical Displays** 11-1 Read Line Plots—pp. 459–462 11-2 Make Line Plots—pp. 463–466

STANDARD 3 – MEASUREMENT AND DATA (MD)

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2
M.MD.2.4 Represent and interpret data.	
M.MD.2.4.2 Show the measurements by creating a line plot, where the horizontal scale is marked off in whole number units.	**Chapter 11 Data and Graphical Displays** 11-1 Read Line Plots—pp. 459–462 11-2 Make Line Plots—pp. 463–466
M.MD.2.4.3 Draw a picture graph and a bar graph (with single–unit scale) to represent a data set with up to four categories.	**Chapter 11 Data and Graphical Displays** 11-3 Read Picture Graphs—pp. 467–470 11-4 Make Picture Graphs—pp. 471–474 11-5 Read Bar Graphs—pp. 477–480 11-6 Make Bar Graphs—pp. 481–484 11-7 Problem Solving: Choose a Model—pp. 485–490
M.MD.2.4.4 Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	**Chapter 11 Data and Graphical Displays** 11-5 Read Bar Graphs—pp. 477–480 11-6 Make Bar Graphs—pp. 481–484 11-7 Problem Solving: Choose a Model—pp. 485–490

STANDARD 4 – GEOMETRY (G)

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2
M.G.2.1 Reason with shapes and their attributes.	
M.G.2.1.1 Recognize and draw shapes having specified attributes such as; identifying triangles, quadrilaterals, pentagons, and hexagons and cubes based on the number of sides or vertices. Also, recognize rectangles, prisms, cones and cylinders.	**Chapter 13 Geometry** 13-1 Identify Two-Dimensional Shapes—pp. 555–558 13-2 Draw Two-Dimensional Shapes—pp. 559–562 13-3 Identify Three-Dimensional Shapes—pp. 565–568 13-4 Faces, Edges and Vertices—pp. 569–572
M.G.2.1.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	**Chapter 14 Equal Shares** 14-1 Partition Rectangles into Rows and Columns—pp. 585–588
M.G.2.1.3 Partition circles and rectangles into two, three, or four equal shares, describing the shares using the words halves, thirds, half of, a third of etc.	**Chapter 14 Equal Shares** 14-2 Halves—pp. 589–592 14-3 Thirds—pp. 595–598 14-4 Fourths—pp. 599–602 14-5 Problem Solving: Compare Models—pp. 603–608

STANDARD 4 – GEOMETRY (G)

Grade 2 Standard & Benchmark Description	*Sadlier Math*, Grade 2

M.G.2.1 Reason with shapes and their attributes.

M.G.2.1.4 Describe the whole as two halves, three thirds, four fourths.	**Chapter 14 Equal Shares** 14-2 Halves—pp. 589–592 14-3 Thirds—pp. 595–598 14-4 Fourths—pp. 599–602 14-5 Problem Solving: Compare Models—pp. 603–608
M.G.2.1.5 Recognize that equal shares of identical wholes need not have the same shape.	**Chapter 14 Equal Shares** 14-2 Halves—pp. 589–592 14-3 Thirds—pp. 595–598 14-4 Fourths—pp. 599–602 14-5 Problem Solving: Compare Models—pp. 603–608