Sadlier Math™

Correlation to the Alabama 2019 Course of Study Mathematics

Grade 2

Volume One
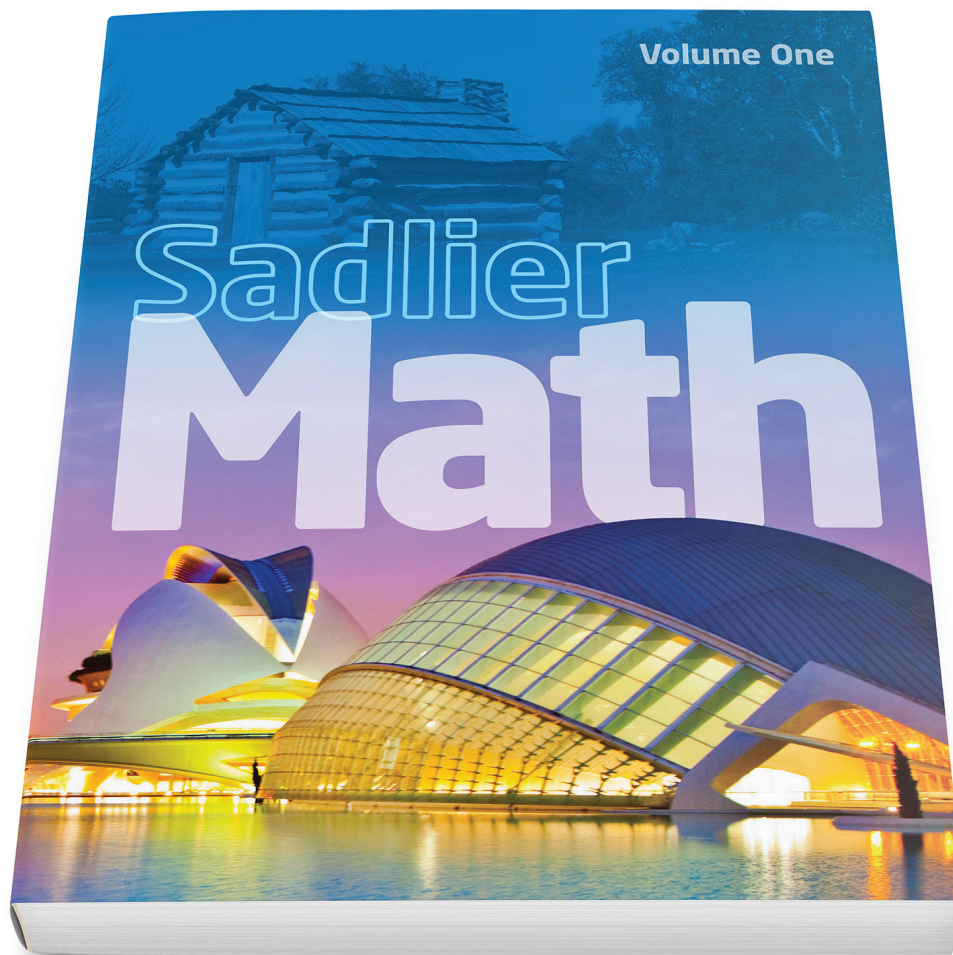
Sadlier **Math**

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Sadlier School

OPERATIONS AND ALGEBRAIC THINKING

Grade 2 Content Standards	*Sadlier Math*, Grade 2

Represent and solve problems involving addition and subtraction.

1. **[2.OA.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, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Chapter 1: 1-1, 1-2, 1-7 & 1-9
- 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: 2-1 through 2-3, 2-10 & 2-12
- 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: 4-8 & 4-9
- 4-8 Three Addends—pp. 175–178
- 4-9 Four Addends—pp. 179–182

Add and subtract within 20.

2. **[2.OA.2]** Fluently add and subtract within 20 using mental strategies such as counting on, making ten, decomposing a number leading to ten, using the relationship between addition and subtraction, and creating equivalent but easier or known sums. By end of Grade 2, know from memory all sums of two one-digit numbers.

Chapter 1: 1-3 through 1-10
- 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 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: 2-2, 2-4 through 2-12
- 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

Work with equal groups of objects to gain foundations for multiplication.

3. **[2.OA.3]** Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

Chapter 10: 10-1 & 10-2
- 10-1 Odd and Even Numbers—pp. 429–432
- 10-2 Represent Even Numbers—pp. 433–436

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4. **[2.OA.4]** Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	**Chapter 10: 10-3 through 10-5** • 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

Understand simple patterns.

| 5. Reproduce, extend, create, and describe patterns and sequences using a variety of materials.

Example: Students count by 2, 5, or 10 using counters or creating color patterns with Unifi | **Chapter 1: 1-10**
• 1-10 Patterns in Addition—pp. 43–46
Chapter 15: 15-3
• 15-3 Time Patterns—pp. 573–576
Chapter 3: 3-2
• 3-5 Counting Patterns by 2s, 5s, and 10s—pp. 129–132 |

NUMBER AND OPERATIONS IN BASE TEN

Grade 2 Content Standards	*Sadlier Math*, Grade 2

Understand place value.

6. **[2.NBT.1]** Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases	
a. 100 can be thought of as a bundle of ten tens — called a "hundred."	**Chapter 7: 7-1** • 7-1 Hundreds—pp. 299–302
b. 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: 7-1** • 7-1 Hundreds—pp. 299–302
7. **[2.NBT.2]** Count within 1000; skip-count by 5s, 10s, and 100s.	**Chapter 3: 3-5** • 3-5 Counting Patterns by 2s, 5s, and 10s—pp. 129–132 **Chapter 7: 7-5** • 7-5 Skip Count Within 1000—pp. 317–320

NUMBER AND OPERATIONS IN BASE TEN

Grade 2 Content Standards	*Sadlier Math*, Grade 2
8. **[2.NBT.3]** Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	**Chapter 3: 3-1 & 3-2** • 3-1 Tens and Ones—pp. 111–114 • 3-2 Expanded Form—pp. 115–118 **Chapter 7: 7-2 through 7-4** • 7-2 Hundreds, Tens, and Ones—pp. 303–306 • 7-3 Place Value in Three-Digit Numbers—pp. 307–310 • 7-4 Expanded Form with Hundreds, Tens, and Ones—pp. 311–314
9. **[2.NBT.4]** Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits using >, =, and < symbols to record the results of comparisons.	**Chapter 7: 7-6 & 7-7** • 7-6 Compare Numbers Within 1000—pp. 321–324 • 7-7 Order Numbers Within 1000—pp. 325–328

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

10. **[2.NBT.5]** 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: 1-1 through 1-10** • 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 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: 2-1 through 2-12** • 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: 4-1 through 4-10** • 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*

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	Chapter 5: 5-1 through 5-9 • 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
11. **[2.NBT.6]** Add up to four two-digit numbers using strategies based on place value and properties of operations.	**Chapter 4: 4-1 through 4-10** • 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
12. **[2.NBT.7]** 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; relate the strategy to a written method and explain the reasoning used. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	**Chapter 1: 1-1 through 1-10** • 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 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: 2-1 through 2-11** • 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 **Chapter 4: 4-1 through 4-9** • 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 *continued*

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	• 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 **Chapter 5: 5-1 through 5-8** • 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 **Chapter 7: 7-8** • 7-8 Problem Solving: Use a Table—pp. 329–334 **Chapter 8: 8-1 through 8-8** • 8-1 Mental Math: Add 1, 10, or 100—pp. 341–344 • 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: 9-1 through 9-9** • 9-1 Mental Math: Subtract 1, 10, or 100—pp. 383–386 • 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
13. [2.NBT.8] 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: 8-1** • 8-1 Mental Math: Add 1, 10, or 100—pp. 341–344 **Chapter 9: 9-1** • 9-1 Mental Math: Subtract 1, 10, or 100—pp. 383–386
14. [2.NBT.9] Explain why addition and subtraction strategies work, using place value and the properties of operations. (Explanations may be supported by drawings or objects.)	**Chapter 5: 5-7** • 5-7 Break Apart to Subtract—pp. 221–224 **Chapter 8: 8-2 through 8-8** • 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 *continued*

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	Chapter 9: 9-2 through 9-9 • 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

MEASUREMENT AND DATA

Grade 2 Content Standards	*Sadlier Math*, Grade 2
Measure and estimate lengths in standard units	
15. **[2.MD.1]** Measure the length of an object to the nearest whole number by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	**Chapter 6: 6-1 through 6-6** • 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
16. **[2.MD.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: 6-7** • 6-7 Measure Using Different Units—pp. 267–270
17. **[2.MD.3]** Estimate lengths using units of inches, feet, centimeters, and meters.	**Chapter 6: 6-1 through 6-5** • 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
18. **[2.MD.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: 6-8 & 6-9** • 6-8 Compare Lengths—pp. 271–274 • 6-9 Add and Subtract Lengths—pp. 275–278

MEASUREMENT AND DATA

Grade 2 Content Standards	*Sadlier Math*, Grade 2

Relate addition and subtraction to length.

19. **[2.MD.5]** Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	**Chapter 6: 6-9 & 6-10** • 6-9 Add and Subtract Lengths—pp. 275–278 • 6-10 Problem Solving: More Than One Way—pp. 279–284
20. **[2.MD.6]** 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: 6-11 & 6-12** • 6-11 Represent Whole Numbers on a Number Line Diagram—pp. 285–288 • 6-12 Add and Subtract on a Number Line Diagram—pp. 289–292

Work with time and money.

21. **[2.MD.7]** Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	
a. Develop an understanding of common terms such as, but not limited to, quarter past, half past, and quarter to.	**Chapter 12: 12-9 through 12-12** • 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
22. **[2.MD.8]** Solve problems with money.	
a. Identify nickels and quarters by name and value.	**Chapter 12: 12-1 through 12-8** • 12-1 Pennies, Nickels, and Dimes—pp. 497–500 • 12-2 Quarters—pp. 501–504 • 12-3 Equal Amounts—pp. 505–508
b. Find the value of a collection of quarters, dimes, nickels, and pennies.	**Chapter 12: 12-1 through 12-8** • 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

MEASUREMENT AND DATA

Grade 2 Content Standards	*Sadlier Math*, Grade 2
c. Solve word problems by adding and subtracting within 100, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the $ and ¢ symbols appropriately (not including decimal notation).	**Chapter 12: 12-1 through 12-8** • 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 • 12-6 Add and Subtract Money—pp. 517–520 • 12-7 One Dollar—pp. 521–524 • 12-8 Paper Money—pp. 525–528

Represent and interpret data.

23. [2.MD.9] Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	**Chapter 11: 11-1 & 11-2** • 11-1 Read Line Plots—pp. 459–462 • 11-2 Make Line Plots—pp. 463–466
24. [2.MD.10] Organize, represent, and interpret data with up to four categories; complete picture graphs when single-unit scales are provided; complete bar graphs when single-unit scales are provided; solve simple put-together, take-apart, and compare problems in a graph.	**Chapter 11: 11-3 through 11-7** • 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

GEOMETRY

Grade 2 Content Standards	*Sadlier Math*, Grade 2

Reason with shapes and their attributes.

25. [2.G.1] Recognize and draw shapes having specified attributes such as a given number of angles or a given number of equal faces. (Sizes are compared directly or visually, not compared by measuring.) Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	**Chapter 13: 13-1 through 13-4** • 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, Vertices—pp. 569–572

GEOMETRY

Grade 2 Content Standards	*Sadlier Math*, Grade 2
26. [2.G.2] Partition a rectangle into rows and columns of same-size squares, and count to find the total number of them.	**Chapter 14: 14-1** • 14-1 Partition Rectangles into Rows and Columns—pp. 585–588
27. [2.G.3] Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves, thirds, half of, a third of*, etc.; and describe the whole as two halves, three thirds, or four fourths. Recognize that equal shares of identical wholes need not have the same shape.	**Chapter 14: 14-1 through 14-5** • 14-1 Partition Rectangles into Rows and Columns—pp. 585–588 • 14-2 Halves—pp. 589–592 • 14-3 Thirds—pp. 595–598 • 14-4 Fourths—pp. 599–602