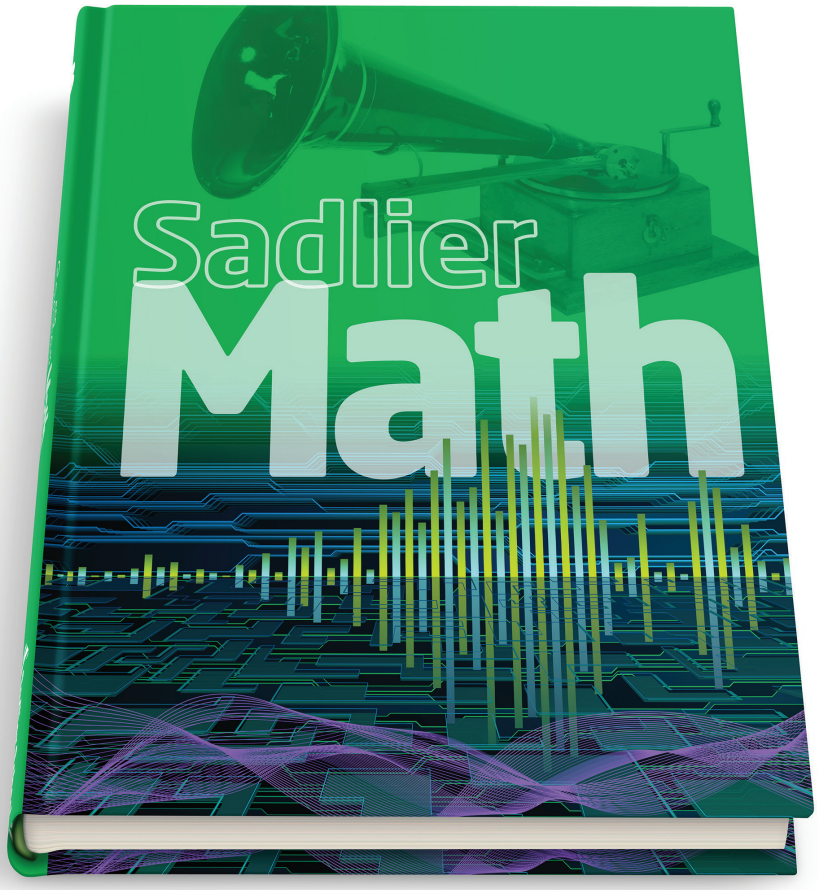
# *Sadlier Math*™

## Correlation to the Texas Essential Knowledge and Skills for Mathematics

**Grade 3**

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# Chapter 111. Subchapter A. Elementary, §111.5, Grade 3, Adopted 2012.

| Grade 3 Content Standards | *Sadlier Math*, Grade 3 |
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| **(2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to:** | |
| (A) compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate; | **Chapter 1: 1-1**<br>• 1-1 Read and Write Multi-Digit Numbers—pp. 2–3 (Write numbers to 1000 using base-ten numerals, number names, and expanded form; TE Develop Concepts: Model 3-Digit Numbers with Base Ten Models)<br>See also Grade 4 (1,000 to 100,000)<br>**Chapter 1: 1-1 through 1-3**<br>• 1-1 Thousands—pp. 2–3 (Read and write numbers to thousands; TE Develop Concepts: Modeling Place Value)<br>• 1-2 What Is One Million?—pp. 4–5 (Use place value to understand millions; TE Develop Concepts: Place Value of 1)<br>• 1-3 Millions—pp. 6–7 (Read and write numbers in millions using numerals and number names; TE Develop Concepts: Number Periods and Place Value) |
| (B) describe the mathematical relationships found in the base-10 place value system through the hundred thousands place; | |
| (C) represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers in order to round whole numbers; and | **Chapter 1: 1-2**<br>• 1-2 Understand the Number Line—pp. 4–5 (Understand how to use a number line; TE Develop Concepts: Number Lines) |
| (D) compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or =. | **Chapter 1: 1-3**<br>• 1-3 Compare and Order Numbers—pp. 6–7 (Compare and order 3-digit numbers using a number line and place value; TE Develop Concepts: Comparing and Ordering) |
| **(3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to:** | |
| (A) represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines; | **Chapter 9: 9-1 through 9-3**<br>• 9-1 Understand Equal Parts—pp. 188–189 (Determine if a shape is divided into equal parts and name the number of equal parts; TE Develop Concepts: Equal Shares)<br>• 9-2 Name Unit Fractions of a Whole—pp. 190–191 (Understand a unit fraction as the quantity formed by 1 part when a whole is partitioned into equal parts; TE Develop Concepts: How Many Equal Parts?)<br>• 9-3 Find Unit Fractions on a Number Line—pp. 192–193 (Find unit fractions on a number line; TE Develop Concepts: Numbers on a Number Line) |

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| (B) determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line; | **Chapter 9: 9-3**<br>• 9-3 Find Unit Fractions on a Number Line—pp. 192–193 (Find unit fractions on a number line; TE Develop Concepts: Numbers on a Number Line) |
| (C) explain that the unit fraction 1/*b* represents the quantity formed by one part of a whole that has been partitioned into *b* equal parts where *b* is a non-zero whole number; | **Chapter 9: 9-2**<br>• 9-2 Name Unit Fractions of a Whole—pp. 190–191 (Understand a unit fraction as the quantity formed by 1 part when a whole is partitioned into equal parts; TE Develop Concepts: How Many Equal Parts?) |
| (D) compose and decompose a fraction *a*/*b* with a numerator greater than zero and less than or equal to *b* as a sum of parts 1/*b*; | **Chapter 9: 9-6**<br>• 9-4 Name Fractions of a Whole—pp. 196–197 (Name fractions of a whole; TE Develop Concepts: How Many Parts?) |
| (E) solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8; | |
| (F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines; | **Chapter 10: 10-1 through 10-3**<br>• 10-1 Whole Numbers and Fractions—pp. 210–211 (Write whole numbers as fractions and recognize fractions that are equivalent to whole numbers; TE Develop Concepts: Dividing a Whole into Parts)<br>• 10-2 Find Equivalent Fractions—pp. 212–213 (Identify equivalent fractions; TE Develop Concepts: Fractions—using two-color counters)<br>• 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215 (Find equivalent fractions on a number line; TE Develop Concepts: Dividing a Number Line) |
| (G) explain that two fractions are equivalent if and only if they are both represented by the same point on the number line or represent the same portion of a same size whole for an area model; and | **Chapter 10: 10-3**<br>• 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215 (Find equivalent fractions on a number line; TE Develop Concepts: Dividing a Number Line) |

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| (H) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models. | **Chapter 10: 10-4 & 10-5**<br>• 10-4 Compare Fractions with the Same Denominator—pp. 218–219 (Compare fractions with the same denominator; TE Develop Concepts: Comparing Whole Numbers on Number Lines)<br>• 10-5 Compare Fractions with the Same Numerator—pp. 220–221 (Compare fractions with the same numerator; TE Develop Concepts: Compare Unit Fractions) |
| **(4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to:** | |
| (A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction; | **Chapter 2: 2-1 through 2-8**<br>• 2-1 Use Addition Properties—pp. 22–23 (Identify and understand the properties of addition; TE Develop Concepts: Properties of Addition)<br>• 2-2 Explore Addition Patterns—pp. 24–25 (Find addition patterns in an addition table; TE Develop Concepts: Explore the Addition Table)<br>• 2-3 Estimate Sums—pp. 26–27 (Estimate sums to 1000 using rounding and frontend estimation; TE Develop Concepts: Compare Estimation Methods)<br>• 2-4 Add with Partial Sums—pp. 30–31 (Use partial sums to add 3-digit numbers; TE Develop Concepts: Explore Partial Sums)<br>• 2-5 Use Place Value to Add: Regroup Once—pp. 32–33 (Add two 3-digit numbers by regrouping ones or tens; TE Develop Concepts: Regrouping During Addition)<br>• 2-6 Use Place Value to Add: Regroup Twice—pp. 34–35 (Add two 3-digit numbers by regrouping ones and tens; TE Develop Concepts: Explore Place Value and Addition)<br>• 2-7 Add with Three or More Addends—pp. 36–37 (Find the sum of three or more addends up to 1000; TE Develop Concepts: Explore 2-Digit Column Addition)<br>• 2-8 Problem Solving: Use a Model—pp. 38–39 (Solve word problems by using a model to organize the information; TE Develop Concepts: Bar Models)<br>**Chapter 3: 2-1 through 3-6**<br>• 3-1 Estimate Differences—pp. 46–47 (Estimate differences by rounding and using frontend estimation; TE Develop Concepts: Compare Estimation Methods for Subtraction)<br>• 3-2 Relate Addition and Subtraction—pp. 48–49 (Use the relationship between addition and subtraction to help solve problems; TE Develop Concepts: Bar Models)<br>• 3-3 Subtract with Partial Differences—pp. 50–51 (Subtract 3-digit numbers using partial differences; TE Develop Concepts: Explore Subtraction)<br>• 3-4 Subtract Three-Digit Numbers—pp. 54–55 (Subtract 3-digit numbers using regrouping; TE Develop Concepts: Model Subtraction Using Base Ten Blocks)<br>• 3-5 Subtract Across Zeros—pp. 56–57 (Subtract 3-digit numbers when the minuend has zeros; TE Develop Concepts: Regrouping with Base Ten Blocks)<br>• 3-6 Problem Solving: Read and Understand—pp. 58–59 (Use the relationship between addition and subtraction to solve problems; TE Develop Concepts: Identify One- and Two-Step Problems) |

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| (B) round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition and subtraction problems; | **Chapter 1: 1-4 & 1-5**<br>• 1-4 Round Numbers to the Nearest Ten—pp. 10–11 (Round numbers to the nearest ten using number lines or place-value concepts; TE Develop Concepts: Which Tens Number is Closer?)<br>• 1-5 Round Numbers to the Nearest Hundred—pp. 12–13 (Round numbers to the nearest 100 using number lines or place-value concepts; TE Develop Concepts: Which Hundred is Closer?) |
| (C) determine the value of a collection of coins and bills; | See Grade 2<br>**Chapter 12: 12-1 through 12-8**<br>• 12-1 Pennies, Nickels, and Dimes—pp. 497–500 (Find the value of a group of coins consisting of pennies, nickels, and dimes; TE Develop Concepts: Exploring Coins)<br>• 12-2 Quarters—pp. 501–504 (Find the value of a group of coins consisting of pennies, nickels, dimes, and quarters; TE Develop Concepts: Exploring Quarters)<br>• 12-3 Equal Amounts—pp. 505–508 (Show amounts of money in more than one way using pennies, nickels, dimes, and quarters; TE Develop Concepts: Counting Coins)<br>• 12-4 Compare Money—pp. 509–512 (Compare an amount of money to the cost of an item; TE Develop Concepts: Explore Comparing Money)<br>• 12-5 Make Change—pp. 513–516 (Find the amount of change needed, given the price and amount paid; TE Develop Concepts: Finding the Difference in Amounts)<br>• 12-6 Add and Subtract Money—pp. 517–520 (Add and subtract amounts of money; TE Develop Concepts: Reviewing Addition and Subtraction)<br>• 12-7 One Dollar—pp. 521–524 (Count and find amounts of coins equal to a dollar; TE Develop Concepts: Exploring Dollars)<br>• 12-8 Paper Money—pp. 525–528 (Find the value of a group of bills; TE Develop Concepts: Counting Tens) |
| (D) determine the total number of objects when equally-sized groups of objects are combined or arranged in arrays up to 10 by 10; | **Chapter 4: 4-3**<br>• 4-3 Represent Multiplication as Arrays—pp. 70–71 (Use multiplication to solve problems in situations involving arrays; TE Develop Concepts: Show Situations With Arrays) |
| (E) represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting; | **Chapter 5: 5-6**<br>• 5-6 Find Patterns in the Multiplication Table—pp. 100–101 (Find and use patterns in the multiplication table; TE Develop Concepts: Using a Multiplication Table)<br>**Chapter 6: 6-7 through 6-11**<br>• 6-7 Use a Bar Model to Multiply—pp. 126–127 (Use bar models to solve multiplication word problems within 100; TE Develop Concepts: Bar Models and Addition)<br>• 6-8 Problem Solving: Make a Table—pp. 128–129 (Solve two-step word problems by making a table to organize the information; TE Develop Concepts: Relate Information in a Two-Step Problem)<br>• 6-9 Use the Associative Property to Multiply—pp. 130–131 (Use the Associative Property of Multiplication to multiply; TE Develop Concepts: Use the Associative Property to Add)<br>*continued* |

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| | • 6-10 Find More Multiplication Patterns—pp. 132–133 (Find and use patterns in the multiplication table; TE Develop Concepts: Explore the Multiplication Table)<br>• 6-11 Multiply by Multiples of 10—pp. 134–135 (Multiply one-digit numbers by multiples of 10; TE Develop Concepts: What Is a Multiple of 10?) |
| (F) recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts; | **Chapter 5: 5-1 through 5-6**<br>• 5-1 Multiply by 2—pp. 88–89 (Fluently multiply whole numbers by 2; TE Develop Concepts: Counting by 2s on a Number Line)<br>• 5-2 Multiply by 5—pp. 90–91 (Fluently multiply whole numbers by 5; TE Develop Concepts: Finding Patterns in 5s)<br>• 5-3 Multiply by 9—pp. 92–93 (Fluently multiply whole numbers by 9; TE Develop Concepts: Patterns in 9s Facts)<br>• 5-4 Multiply by 1 and 0—pp. 96–97 (Fluently multiply whole numbers by 1 and 0; TE Develop Concepts: Representing Groups of 1 and 0)<br>• 5-5 Multiply by 10—pp. 98–99 (Fluently multiply whole numbers by 10; TE Develop Concepts: Skip Counting by 10s)<br>• 5-6 Find Patterns in the Multiplication Table—pp. 100–101 (Find and use patterns in the multiplication table; TE Develop Concepts: Using a Multiplication Table)<br>**Chapter 6: 6-2 through 6-6, 6-11**<br>• 6-2 Multiply by 3—pp. 114–115 (Fluently multiply whole numbers by 3; TE Develop Concepts: Skip Count to Multiply)<br>• 6-3 Multiply by 4—pp. 116–117 (Use doubles of known facts for 2 to multiply by 4; TE Develop Concepts: How Much of the Multiplication Table Should You Know?)<br>• 6-4 Multiply by 6—pp. 118–119 (Fluently multiply whole numbers by 6; TE Develop Concepts: What Are Doubles?)<br>• 6-5 Multiply by 7—pp. 120–121 (Fluently multiply whole numbers by 7; TE Develop Concepts: Use What You Know to Find a Product)<br>• 6-6 Multiply by 8—pp. 122–123 (Fluently multiply whole numbers by 8; TE Develop Concepts: How to Practice the Facts)<br>• 6-11 Multiply by Multiples of 10—pp. 134–135 (Multiply one-digit numbers by multiples of 10; TE Develop Concepts: What Is a Multiple of 10?) |
| (G) use strategies and algorithms, including the standard algorithm, to multiply a two-digit number by a one-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties; | See Grade 4<br>**Chapter 5: 5-1 through 5-3**<br>• 5-1 Multiply with Regrouping—pp. 88–89 (Use regrouping to multiply two numbers; TE Develop Concepts: Multiplication with Money)<br>• 5-2 Use Properties to Multiply by One-Digit Numbers—pp. 90–91 (Use properties to multiply efficiently; TE Develop Concepts: Using Properties to Make Multiplication Simpler)<br>• 5-3 Use Area Models to Multiply by One-Digit Numbers—pp. 92–93 (Multiply by one-digit numbers using area models; TE Develop Concepts: Arrays) |
| (H) determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally; | **Chapter 4: 4-5**<br>• 4-5 Represent Division by Sharing—pp. 76–77 (Explore the concept of division as sharing; TE Develop Concepts: Make Equal Groups) |

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| (I) determine if a number is even or odd using divisibility rules; | **Chapter 2: 2-2**<br>• 2-2 Explore Addition Patterns—pp. 24–25 (Find addition patterns in an addition table; odd and even numbers; TE Develop Concepts: Explore the Addition Table) |
| (J) determine a quotient using the relationship between multiplication and division; and | **Chapter 7: 7-1**<br>• 7-1 Relate Multiplication and Division—pp. 142–143 (Use related multiplication and division facts to solve problems; TE Develop Concepts: Grouping in Division) |
| (K) solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts. | **Chapter 5: 5-1**<br>• 5-1 Multiply by 2—pp. 88–89<br>• 5-2 Multiply by 5—pp. 90–91<br>• 5-3 Multiply by 9—pp. 92–93<br>• 5-4 Multiply by 1 and 0—pp. 96–97<br>• 5-5 Multiply by 10—pp. 98–99<br>• 5-6 Find Patterns in the Multiplication Table—pp. 100–101<br>• 5-7 Solve for Unknowns—pp. 102–103<br>• 5-8 Problem Solving: Compare Models—pp. 104–105<br>**Chapter 6: 6-1**<br>• 6-1 Break Apart to Multiply—pp. 112–113<br>• 6-2 Multiply by 3—pp. 114–115<br>• 6-3 Multiply by 4—pp. 116–117<br>• 6-4 Multiply by 6—pp. 118–119<br>• 6-5 Multiply by 7—pp. 120–121<br>• 6-6 Multiply by 8—pp. 122–123<br>• 6-7 Use a Bar Model to Multiply—pp. 126–127<br>• 6-8 Problem Solving: Make a Table—pp. 128–129<br>• 6-9 Use the Associative Property to Multiply—pp. 130–131<br>• 6-10 Find More Multiplication Patterns—pp. 132–133<br>• 6-11 Multiply by Multiples of 10—pp. 134–135<br>**Chapter 7: 7-1**<br>• 7-1 Relate Multiplication and Division—pp. 142–143<br>• 7-2 Divide by 2—pp. 144–145<br>• 7-3 Divide by 3—pp. 146–147<br>• 7-4 Divide by 4—pp. 150–151<br>• 7-5 Divide by 5—pp. 152–153<br>• 7-6 Problem Solving: Use Drawings to Solve Problems—pp. 154–155<br>**Chapter 8: 8-1**<br>• 8-1 Divide by 6—pp. 162–163<br>• 8-2 Divide by 7—pp. 164–165<br>• 8-3 Divide by 8—pp. 166–167<br>• 8-4 Divide by 9—pp. 168–169<br>• 8-5 One and Zero in Division—pp. 172–173<br>• 8-6 Problem Solving: Work Backward—pp. 174–175<br>• 8-7 Fact Families—pp. 176–177<br>• 8-8 Use Facts to Solve Problems—pp. 178–179<br>• 8-9 Use Order of Operations—pp. 180–181 |

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| **(5) Algebraic reasoning. The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to:** | |
| (A) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations; | **Chapter 2: 2-1 through 2-8**<br>• 2-1 Use Addition Properties—pp. 22–23 (Identify and understand the properties of addition; TE Develop Concepts: Properties of Addition)<br>• 2-2 Explore Addition Patterns—pp. 24–25 (Find addition patterns in an addition table; TE Develop Concepts: Explore the Addition Table)<br>• 2-3 Estimate Sums—pp. 26–27 (Estimate sums to 1000 using rounding and frontend estimation; TE Develop Concepts: Compare Estimation Methods)<br>• 2-4 Add with Partial Sums—pp. 30–31 (Use partial sums to add 3-digit numbers; TE Develop Concepts: Explore Partial Sums)<br>• 2-5 Use Place Value to Add: Regroup Once—pp. 32–33 (Add two 3-digit numbers by regrouping ones or tens; TE Develop Concepts: Regrouping During Addition)<br>• 2-6 Use Place Value to Add: Regroup Twice—pp. 34–35 (Add two 3-digit numbers by regrouping ones and tens; TE Develop Concepts: Explore Place Value and Addition)<br>• 2-7 Add with Three or More Addends—pp. 36–37 (Find the sum of three or more addends up to 1000; TE Develop Concepts: Explore 2-Digit Column Addition)<br>• 2-8 Problem Solving: Use a Model—pp. 38–39 (Solve word problems by using a model to organize the information; TE Develop Concepts: Bar Models)<br>**Chapter 3: 3-1 through 3-6**<br>• 3-1 Estimate Differences—pp. 46–47 (Estimate differences by rounding and using frontend estimation; TE Develop Concepts: Compare Estimation Methods for Subtraction)<br>• 3-2 Relate Addition and Subtraction—pp. 48–49 (Use the relationship between addition and subtraction to help solve problems; TE Develop Concepts: Bar Models)<br>• 3-3 Subtract with Partial Differences—pp. 50–51 (Subtract 3-digit numbers using partial differences; TE Develop Concepts: Explore Subtraction)<br>• 3-4 Subtract Three-Digit Numbers—pp. 54–55 (Subtract 3-digit numbers using regrouping; TE Develop Concepts: Model Subtraction Using Base Ten Blocks)<br>• 3-5 Subtract Across Zeros—pp. 56–57 (Subtract 3-digit numbers when the minuend has zeros; TE Develop Concepts: Regrouping with Base Ten Blocks)<br>• 3-6 Problem Solving: Read and Understand—pp. 58–59 (Use the relationship between addition and subtraction to solve problems; TE Develop Concepts: Identify One- and Two-Step Problems) |
| (B) represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations; | **Chapter 8: 8-8**<br>• 8-8 Use Facts to Solve Problems—pp. 178–179 (Fluently multiply and divide within 100 to solve word problems; TE Develop Concepts: Identifying Necessary Information for Problem Solving) |

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| (C) describe a multiplication expression as a comparison such as 3 x 24 represents 3 times as much as 24; | See Grade 4<br>**Chapter 4: 4-5**<br>• 4-5 Multiply to Compare Numbers—pp. 78–79 (Interpret a multiplication equation as a comparison; TE Develop Concepts: Count Your Chickens Before They Hatch—egg carton models) |
| (D) determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product; and | **Chapter 5: 7**<br>• 5-7 Solve for Unknowns—pp. 102–103 (Find the unknown in a multiplication equation; TE Develop Concepts: Strategies for Fluency) |
| (E) represent real-world relationships using number pairs in a table and verbal descriptions. | See Grade 4<br>**Chapter 15: 15-2**<br>• 15-2 Use Multiplication to Rename Measures—pp. 326–327 (Solve length problems using customary units of measure; number pairs in a table; TE Develop Concepts: Conversion Tables) |
| **(6) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to:** | |
| (A) classify and sort two- and three-dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language; | **Chapter 14: 14-1 & 14-2**<br>• 14-1 Classify Polygons—pp. 294–295 (Classify polygons by their attributes; TE Develop Concepts: Describe Geometric Figures)<br>• 14-2 Classify Quadrilaterals—pp. 296–297 (Classify quadrilaterals by their attributes; TE Develop Concepts: More than One Name) |
| (B) use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories; | **Chapter 14: 14-1 through 14-3**<br>• 14-1 Classify Polygons—pp. 294–295 (Classify polygons by their attributes; TE Develop Concepts: Describe Geometric Figures)<br>• 14-2 Classify Quadrilaterals—pp. 296–297 (Classify quadrilaterals by their attributes; TE Develop Concepts: More than One Name)<br>• 14-3 Draw Quadrilaterals—pp. 298–299 (Draw quadrilaterals that are not rectangles, rhombuses, or squares; TE Develop Concepts: Draw Parallel Lines and Right Angles) |

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| (C) determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row; | **Chapter 15: 15-1 through 15-6**<br>• 15-1 Understand Area—pp. 312–313 (Understand concepts of area measurement; TE Develop Concepts: Describe Lengths of Shapes)<br>• 15-2 Find Area Using Standard Units—pp. 314–315 (Measure area by counting unit squares; TE Develop Concepts: Names for Unit Squares)<br>• 15-3 Find the Area of a Rectangle and a Square—pp. 316–317 (Find the area of a rectangle and a square; TE Develop Concepts: Review Arrays)<br>• 15-4 Find Area Using the Distributive Property—pp. 320–321 (Find the area of a rectangle by using the Distributive Property; TE Develop Concepts: Review the Distributive Property)<br>• 15-5 Find Area of Composite Shapes—pp. 322–323 (Find the area of a composite shape by decomposition into nonoverlapping rectangles; TE Develop Concepts: Decompose Shapes into Rectangles and Squares)<br>• 15-6 Problem Solving: Guess and Test—pp. 324–325 (Solve problems by using guess and test; TE Develop Concepts: Discuss the Problem-Solving Plan) |
| (D) decompose composite figures formed by rectangles into non-overlapping rectangles to determine the area of the original figure using the additive property of area; and | **Chapter 15: 15-4 & 15-5**<br>• 15-4 Find Area Using the Distributive Property—pp. 320–321 (Find the area of a rectangle by using the Distributive Property; TE Develop Concepts: Review the Distributive Property)<br>• 15-5 Find Area of Composite Shapes—pp. 322–323 (Find the area of a composite shape by decomposition into nonoverlapping rectangles; TE Develop Concepts: Decompose Shapes into Rectangles and Squares)<br>Related content<br>**Chapter 14: 14-4**<br>• 14-4 Compose and Decompose Shapes—pp. 302–303 (Compose and decompose shapes; TE Develop Concepts: Tetrominoes) |
| (E) decompose two congruent two-dimensional figures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape. | |
| **(7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. The student is expected to:** | |
| (A) represent fractions of halves, fourths, and eighths as distances from zero on a number line; | **Chapter 11: 11-1**<br>• 11-1 Measure Length—pp. 232–233 (Measure lengths to the nearest quarter and half inch; TE Develop Concepts: Use Measuring Tools for Length)<br>Related content<br>**Chapter 1: 1-2**<br>• 1-2 Understand the Number Line—pp. 4–5 (Understand how to use a number line; TE Develop Concepts: Number Lines) |

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| | **Chapter 9: 9-5**<br>• 9-5 Find Fractions on a Number Line—pp. 198–199 (Name and plot fractions using a number line; TE Develop Concepts: Building Numbers on a Number Line) |
| (B) determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems; | **Chapter 16: 16-1 through 16-6**<br>• 16-1 Understand Perimeter—pp. 332–333 (Find the perimeter of polygons that are shown on grids; TE Develop Concepts: Explore Distance Around a Shape)<br>• 16-2 Find Perimeter—pp. 334–335 (Find the perimeter of polygons; TE Develop Concepts: Explore Squares and Rectangles)<br>• 16-3 Find Unknown Side Lengths—pp. 336–337 (Find the unknown side lengths of a polygon when given the perimeter; TE Develop Concepts: Explore Side Lengths)<br>• 16-4 Problem Solving: Compare Strategies—pp. 340–341 (Solve problems in two ways by using different strategies and comparing them; TE Develop Concepts: Analyze Strategies)<br>• 16-5 Same Perimeter, Different Areas—pp. 342–343 (Find rectangles that have the same perimeter and different areas; TE Develop Concepts: Explore Perimeter and Area)<br>• 16-6 Same Area, Different Perimeters—pp. 344–345 (Find rectangles that have the same area and different perimeters; TE Develop Concepts: Explore Area and Perimeter) |
| (C) determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes; | **Chapter 13: 13-2 through 13-5**<br>• 13-2 Measure Elapsed Time—pp. 278–279 (Measure time intervals in hours and minutes; TE Develop Concepts: Explore 1 Minute)<br>• 13-3 Find Start and End Times—pp. 282–283 (Find the start or end time of an event given one time and the elapsed time; TE Develop Concepts: Number Lines and Time)<br>• 13-4 Operations with Time—pp. 284–285 (Solve word problems involving addition and subtraction of time intervals in minutes; TE Develop Concepts: Decide What to Find and Do for Time Problems)<br>• 13-5 Problem Solving: Use Logical Reasoning—pp. 286–287 (Solve problems, including those involving time, using logical reasoning; TE Develop Concepts: Analyze Problem Situations) |
| (D) determine when it is appropriate to use measurements of liquid volume (capacity) or weight; and | **Chapter 11: 11-2 through 11-5**<br>• 11-2 Estimate and Measure Liquid Volume—pp. 234–235 (Estimate liquid volumes in the metric system; TE Develop Concepts: Use Measures of Length to Describe Objects)<br>• 11-3 Operations with Liquid Volume—pp. 236–237 (Solve one-step problems involving liquid volumes that are given in the same units; TE Develop Concepts: Uses of Tables)<br>• 11-4 Estimate and Measure Mass—pp. 240–241 (Estimate and measure masses using the metric system; TE Develop Concepts: Use Measures of Mass)<br>• 11-5 Operations with Mass—pp. 242–243 (Solve one-step problems involving masses that are given in the same units; TE Develop Concepts: Choosing an Operation to Use) |
| (E) determine liquid volume (capacity) or weight using appropriate units and tools. | |

## Chapter 111. Subchapter A. Elementary, §111.5, Grade 3, Adopted 2012.

| Grade 3 Content Standards | *Sadlier Math*, Grade 3 |
|---|---|
| **(8) Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to:** | |
| (A) summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals; and | **Chapter 12: 12-1 through 12-4, 12-7 & 12-8**<br>• 12-1 Read Picture Graphs—pp. 252–253 (Read and interpret scaled picture graphs; TE Develop Concepts: Using Cubes to Represent Objects)<br>• 12-2 Make Picture Graphs—pp. 254–255 (Make a scaled picture graph using data; TE Develop Concepts: Review the Parts of a Picture Graph)<br>• 12-3 Read Bar Graphs—pp. 256–257 (Read a scaled bar graph; TE Develop Concepts: Use a Number Line to Understand Scale)<br>• 12-4 Make Bar Graphs—pp. 258–259 (Create a scaled bar graph from data; TE Develop Concepts: Determining Scale)<br>• 12-7 Read Line Plots—pp. 266–267 (Read and interpret a line plot; TE Develop Concepts: Making an Ordered List)<br>• 12-8 Make Line Plots—pp. 268–269 (Make a line plot; TE Develop Concepts: Representing Data Using Line Plots) |
| (B) solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals. | **Chapter 12: 12-1 through 12-8**<br>• 12-1 Read Picture Graphs—pp. 252–253 (Read and interpret scaled picture graphs; TE Develop Concepts: Using Cubes to Represent Objects)<br>• 12-2 Make Picture Graphs—pp. 254–255 (Make a scaled picture graph using data; TE Develop Concepts: Review the Parts of a Picture Graph)<br>• 12-3 Read Bar Graphs—pp. 256–257 (Read a scaled bar graph; TE Develop Concepts: Use a Number Line to Understand Scale)<br>• 12-4 Make Bar Graphs—pp. 258–259 (Create a scaled bar graph from data; TE Develop Concepts: Determining Scale)<br>• 12-5 Data and Two-Step Problems—pp. 260–261 (Solve two-step problems using a scaled bar graph; TE Develop Concepts: Using Data to Answer Questions)<br>• 12-6 Problem Solving: Compare Models—pp. 264–265 (Compare different models to use for representing data; TE Develop Concepts: The Purpose of Graphing)<br>• 12-7 Read Line Plots—pp. 266–267 (Read and interpret a line plot; TE Develop Concepts: Making an Ordered List)<br>• 12-8 Make Line Plots—pp. 268–269 (Make a line plot; TE Develop Concepts: Representing Data Using Line Plots) |
| **(9) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:** | |
| | N/A |