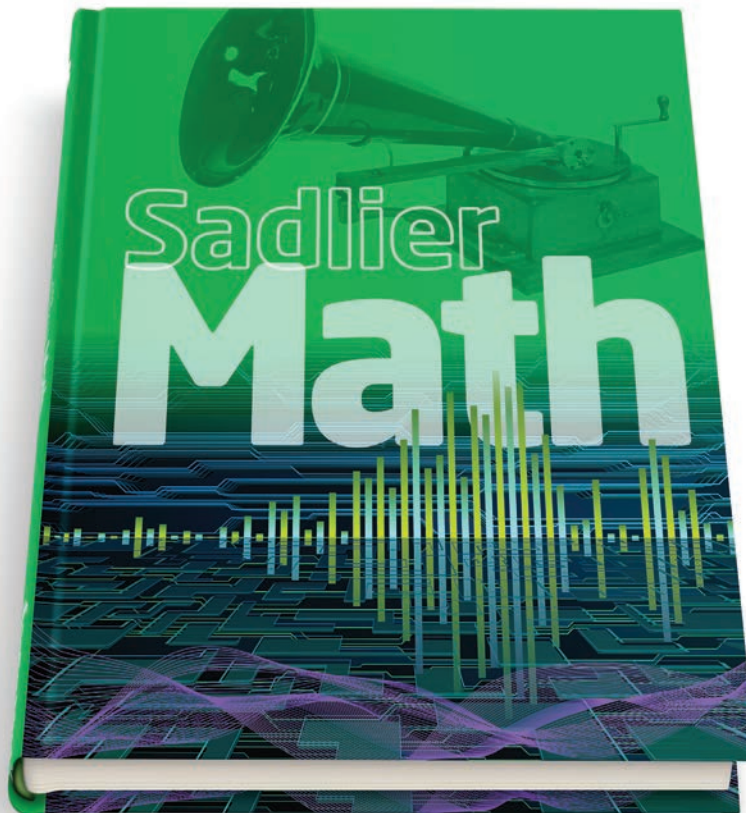# *Sadlier Math*™

Correlation to the New York State
Next Generation Mathematics Learning Standards (2017)

Grade 3

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NY-3.OA   OPERATIONS AND ALGEBRAIC THINKING

Grade 3 Content Standards	*Sadlier Math*, Grade 3

Represent and solve problems involving multiplication and division.

NY-3.OA.1 Interpret products of whole numbers. e.g., Interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. Describe a context in which a total number of objects can be expressed as 5 × 7.	**Chapter 4 Multiplication and Division Concepts** • 4-1 Represent Multiplication as Repeated Addition—pp. 66–67 • 4-2 Represent Multiplication on a Number Line—pp. 68–69 • 4-3 Represent Multiplication as Arrays—pp. 70–71 • 4-7 Problem Solving: Write an Equation—pp. 80–81 **Chapter 5 Multiplication Facts** • 5-1 Multiply by 2—pp. 88–89 • 5-2 Multiply by 5—pp. 90–91 • 5-3 Multiply by 9—pp. 92–93 • 5-4 Multiply by 1 and 10—pp. 96–97 **Chapter 6 More Multiplication Facts** • 6-2 Multiply by 3—pp. 114–115 • 6-3 Multiply by 4—pp. 116–117 • 6-4 Multiply by 6—pp. 118–119 • 6-5 Multiply by 7—pp. 120–121 • 6-6 Multiply by 8—pp. 122–123 **Chapter 8 More Division Facts** • 8-7 Fact Families—pp. 176–177 • 8-8 Use Facts to Solve Problems—pp. 178–179
NY-3.OA.2 Interpret whole-number quotients of whole numbers. e.g., Interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. Describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	**Chapter 4 Multiplication and Division Concepts** • 4-5 Represent Division by Sharing—pp. 76–77 • 4-6 Represent Division by Repeated Subtraction—pp. 78–79 **Chapter 7 Division Facts** • 7-2 Divide by 2—pp. 144–145 • 7-3 Divide by 3—pp. 146–147 • 7-4 Divide by 4—pp. 150–151 • 7-5 Divide by 5—pp. 152–153 **Chapter 8 More Division Facts** • 8-1 Divide by 6—pp. 162–163 • 8-2 Divide by 7—pp. 164–165 • 8-3 Divide by 8—pp. 166–167 • 8-4 Divide by 9—pp. 168–169

Sadlier School

NY-3.OA OPERATIONS AND ALGEBRAIC THINKING

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	• 8-5 One and Zero in Division—pp. 172–173 • 8-7 Fact Families—pp. 176–177 • 8-8 Use Facts to Solve Problems—pp. 178–179
NY-3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities. e.g., using drawings and equations with a symbol for the unknown number to represent the problem.	**Chapter 4 Multiplication and Division Concepts** • 4-1 Represent Multiplication as Repeated Addition—pp. 66–67 • 4-2 Represent Multiplication on a Number Line—pp. 68–69 • 4-3 Represent Multiplication as Arrays—pp. 70–71 • 4-4 Multiply with the Commutative Property—pp. 74–75 • 4-5 Represent Division by Sharing—pp. 76–77 • 4-6 Represent Division by Repeated Subtraction—pp. 78–79 • 4-7 Problem Solving: Write an Equation—pp. 80–81 **Chapter 5 Multiplication Facts** • 5-1 Multiply by 2—pp. 88–89 • 5-2 Multiply by 5—pp. 90–91 • 5-3 Multiply by 9—pp. 92–93 • 5-4 Multiply by 1 and 10—pp. 96–97 • 5-5 Multiply by 10—pp. 98–99 • 5-7 Solve for Unknowns—pp. 102–103 • 5-8 Problem Solving: Use a Model—pp. 104–105 **Chapter 6 More Multiplication Facts** • 6-1 Break Apart to Multiply—pp. 112–113 • 6-2 Multiply by 3—pp. 114–115 • 6-3 Multiply by 4—pp. 116–117 • 6-4 Multiply by 6—pp. 118–119 • 6-5 Multiply by 7—pp. 120–121 • 6-6 Multiply by 8—pp. 122–123 • 6-7 Use a Bar Model to Multiply—pp. 126–127 • 6-9 Use the Associative Property to Multiply—pp. 130–131 **Chapter 7 Division Facts** • 7-1 Relate Multiplication and Division—pp. 142–143 • 7-2 Divide by 2—pp. 144–145 • 7-3 Divide by 3—pp. 146–147 *continued*

NY-3.OA   OPERATIONS AND ALGEBRAIC THINKING

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	• 7-4 Divide by 4—pp. 150–151 • 7-5 Divide by 5—pp. 152–153 • 7-6 Problem Solving: Use Drawings to Solve Problems—pp. 154–155 **Chapter 8 More Division Facts** • 8-1 Divide by 6—pp. 162–163 • 8-2 Divide by 7—pp. 164–165 • 8-3 Divide by 8—pp. 166–167 • 8-4 Divide by 9—pp. 168–169 • 8-5 One and Zero in Division—pp. 172–173 • 8-8 Use Facts to Solve Problems—pp. 178–179
NY-3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. e.g., Determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = \underline{} \div 3$, $6 \times 6 = ?$	**Chapter 5 Multiplication Facts** • 5-7 Solve for Unknowns—pp. 102–103 **Chapter 6 More Multiplication Facts** • 6-7 Use a Bar Model to Multiply—pp. 126–127 • 6-9 Use the Associative Property to Multiply—pp. 130–131 **Chapter 7 Division Facts** • 7-1 Relate Multiplication and Division—pp. 142–143 • 7-2 Divide by 2—pp. 144–145 • 7-3 Divide by 3—pp. 146–147 • 7-4 Divide by 4—pp. 150–151 • 7-5 Divide by 5—pp. 152–153

Understand properties of multiplication and the relationship between multiplication and division.

NY-3.OA.5 Apply properties of operations as strategies to multiply and divide. e.g., • If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) • $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) • Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.) *continued*	**Chapter 4 Multiplication and Division Concepts** • 4-4 Multiply with the Commutative Property—pp. 74–75 **Chapter 5 Multiplication Facts** • 5-4 Multiply by 1 and 10—pp. 96–97 **Chapter 6 More Multiplication Facts** • 6-1 Break Apart to Multiply—pp. 112–113 • 6-2 Multiply by 3—pp. 114–115 • 6-3 Multiply by 4—pp. 116–117 • 6-4 Multiply by 6—pp. 118–119 • 6-5 Multiply by 7—pp. 120–121 *continued*

NY-3.OA	OPERATIONS AND ALGEBRAIC THINKING
Grade 3 Content Standards	***Sadlier Math*, Grade 3**
Note: Students need not use formal terms for these properties. Note: A variety of representations can be used when applying the properties of operations, which may or may not include parentheses. The area model (3.MD.7c) is a multiplication/division strategy that applies the distributive property (3.OA.5).	• 6-6 Multiply by 8—pp. 122–123 • 6-7 Use a Bar Model to Multiply—pp. 126–127 • 6-9 Use the Associative Property to Multiply— pp. 130–131
NY-3.OA.6 Understand division as an unknown-factor problem. e.g., Find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.	**Chapter 7 Division Facts** • 7-1 Relate Multiplication and Division—pp. 142–143 • 7-2 Divide by 2—pp. 144–145 • 7-3 Divide by 3—pp. 146–147 • 7-4 Divide by 4—pp. 150–151 • 7-5 Divide by 5—pp. 152–153 • 7-6 Problem Solving: Use Drawings to Solve Problems—pp. 154–155 **Chapter 8 More Division Facts** • 8-1 Divide by 6—pp. 162–163 • 8-2 Divide by 7—pp. 164–165 • 8-3 Divide by 8—pp. 166–167 • 8-4 Divide by 9—pp. 168–169 • 8-5 One and Zero in Division—pp. 172–173 • 8-7 Fact Families—pp. 176–177 • 8-8 Use Facts to Solve Problems—pp. 178–179

Multiply and divide within 100.	
NY-3.OA.7	
NY-3.OA.7a Fluently solve single-digit multiplication and related divisions, using strategies such as the relationship between multiplication and division or properties of operations. e.g., Knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8.	**Chapter 5 Multiplication Facts** • 5-1 Multiply by 2—pp. 88–89 • 5-2 Multiply by 5—pp. 90–91 • 5-3 Multiply by 9—pp. 92–93 • 5-4 Multiply by 1 and 10—pp. 96–97 • 5-5 Multiply by 10—pp. 98–99 • 5-6 Find Patterns in the Multiplication Table— pp. 100–101 • 5-7 Solve for Unknowns—pp. 102–103 *continued*

NY-3.OA   OPERATIONS AND ALGEBRAIC THINKING

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	Chapter 6 More Multiplication Facts • 6-1 Break Apart to Multiply—pp. 112–113 • 6-2 Multiply by 3—pp. 114–115 • 6-3 Multiply by 4—pp. 116–117 • 6-4 Multiply by 6—pp. 118–119 • 6-5 Multiply by 7—pp. 120–121 • 6-6 Multiply by 8—pp. 122–123 • 6-7 Use a Bar Model to Multiply—pp. 126–127 • 6-8 Problem Solving: Make a Table—pp. 128–129 • 6-9 Use the Associative Property to Multiply—pp. 130–131 • 6-10 Find More Multiplication Patterns—pp. 132–133 • 6-11 Multiply by Multiples of 10—pp. 134–135 **Chapter 7 Division Facts** • 7-1 Relate Multiplication and Division—pp. 142–143 • 7-2 Divide by 2—pp. 144–145 • 7-3 Divide by 3—pp. 146–147 • 7-4 Divide by 4—pp. 150–151 • 7-5 Divide by 5—pp. 152–153 **Chapter 8 More Division Facts** • 8-1 Divide by 6—pp. 162–163 • 8-2 Divide by 7—pp. 164–165 • 8-3 Divide by 8—pp. 166–167 • 8-4 Divide by 9—pp. 168–169 • 8-5 One and Zero in Division—pp. 172–173 • 8-7 Fact Families—pp. 176–177 • 8-8 Use Facts to Solve Problems—pp. 178–179
NY-3.OA.7b Know from memory all products of two one-digit numbers. Note: Fluency involves a mixture of just knowing some answers, knowing some answers from patterns, and knowing some answers from the use of strategies.	**Chapter 5 Multiplication Facts** • 5-1 Multiply by 2—pp. 88–89 • 5-2 Multiply by 5—pp. 90–91 • 5-3 Multiply by 9—pp. 92–93 • 5-4 Multiply by 1 and 10—pp. 96–97 • 5-5 Multiply by 10—pp. 98–99 • 5-6 Find Patterns in the Multiplication Table—pp. 100–101 • 5-7 Solve for Unknowns—pp. 102–103 *continued*

NY-3.OA OPERATIONS AND ALGEBRAIC THINKING

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	Chapter 6 More Multiplication Facts • 6-1 Break Apart to Multiply—pp. 112–113 • 6-2 Multiply by 3—pp. 114–115 • 6-3 Multiply by 4—pp. 116–117 • 6-4 Multiply by 6—pp. 118–119 • 6-5 Multiply by 7—pp. 120–121 • 6-6 Multiply by 8—pp. 122–123 • 6-7 Use a Bar Model to Multiply—pp. 126–127 • 6-8 Problem Solving: Make a Table—pp. 128–129 • 6-9 Use the Associative Property to Multiply—pp. 130–131 • 6-10 Find More Multiplication Patterns—pp. 132–133 • 6-11 Multiply by Multiples of 10—pp. 134–135

Solve problems involving the four operations, and identify and extend patterns in arithmetic.

NY-3.OA.8 Solve two-step word problems posed with whole numbers and having whole-number answers using the four operations. Note: Two-step problems need not be represented by a single expression or equation.	**Chapter 2 Addition Within 1000** • 2-8 Problem Solving: Use a Model—pp. 38–39 **Chapter 3 Subtraction Within 1000** • 3-6 Problem Solving: Write and Solve an Equation (two-step problems)—pp. 58–59 **Chapter 6 More Multiplication Facts** • 6-8 Problem Solving: Make a Table—pp. 128–129 **Chapter 8 More Division Facts** • 8-6 Problem Solving: Work Backward—pp. 174–175 **Chapter 12 Data** • 12-5 Data and Two-Step Problems—pp. 260–261
NY-3.OA.8a Represent these problems using equations or expressions with a letter standing for the unknown quantity.	**Chapter 11 Measurement** • 11-6 Problem Solving: Write an Equation (use a letter for the unknown quantity)—pp. 244–245
NY-3.OA.8b Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	**Chapter 1 Number Sense** • 1-4 Round Numbers to the Nearest Ten—pp. 10–11 • 1-6 Problem Solving: The Four-Step Process (use rounding, check for reasonable answer)—pp. 14–15 *continued*

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NY-3.OA   OPERATIONS AND ALGEBRAIC THINKING

Grade 3 Content Standards	*Sadlier Math*, Grade 3
	Chapter 2 Addition Within 1000 • 2-5 Use Place Value to Add: Regroup Once (check reasonableness using rounding)—pp. 32–33 • 2-3 Estimate Sums (estimate sums to 1000 using rounding and front end estimation)—pp. 26–27 **Chapter 3 Subtraction Within 1000** • 3-1 Estimate Differences (estimate differences by rounding and using front end estimation.)—pp. 46–47 • 3-5 Subtract Across Zeros (check reasonableness using rounding)—pp. 56–57
NY-3.OA.9 Identify and extend arithmetic patterns (including patterns in the addition table or multiplication table).	**Chapter 2 Addition Within 1000** • 2-2 Explore Addition Patterns—pp. 24–25 **Chapter 5 Multiplication Facts** • 5-5 Multiply by 10—pp. 98–99 • 5-6 Find Patterns in the Multiplication Table—pp. 100–101 **Chapter 6 More Multiplication Facts** • 6-10 Find More Multiplication Patterns—pp. 132–133

NY-3.NBT   NUMBER AND OPERATIONS IN BASE TEN

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Use place value understanding and properties of operations to perform multi-digit arithmetic.	
NY-3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	**Chapter 1 Number Sense** • 1-4 Round Numbers to the Nearest Ten—pp. 10–11 • 1-5 Round Numbers to the Nearest Hundred—pp. 12–13

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NY-3.NBT	NUMBER AND OPERATIONS IN BASE TEN
Grade 3 Content Standards	***Sadlier Math*, Grade 3**
NY-3.NBT.2 Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. Note on and/or: Students should be taught to use strategies and algorithms based on place value, properties of operations, and the relationship between addition and subtraction; however, when solving any problem, students can choose any strategy. Note: A range of algorithms may be used.	**Chapter 1 Number Sense** • 1-6 Problem Solving: The Four-Step Process—p. 14–15 **Chapter 2 Addition Within 1000** • 2-1 Use Addition Properties—pp. 22–23 • 2-3 Estimate Sums—pp. 26–27 • 2-4 Add with Partial Sums—pp. 30–31 • 2-5 Use Place Value to Add: Regroup Once (whole dollar amounts)—pp. 32–33 • 2-6 Use Place Value to Add: Regroup Twice—pp. 34–35 • 2-7 Add with Three or More Addends—pp. 36–37 • 2-8 Problem Solving: Use a Model (whole dollar amounts)—pp. 38–39 **Chapter 3 Subtraction Within 1000** • 3-1 Estimate Differences—pp. 46–47 • 3-2 Relate Addition and Subtraction—pp. 48–49 • 3-3 Subtract with Partial Differences—pp. 50–51 • 3-4 Subtract Three-Digit Numbers—pp. 54–55 • 3-5 Subtract Across Zeros—pp. 56–57 • 3-6 Problem Solving: Write and Solve an Equation—pp. 58–59
NY-3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 using strategies based on place value and properties of operations. e.g., 9 × 80, 5 × 60	**Chapter 5 Multiplication Facts** • 5-5 Multiply by 10—pp. 98–99 **Chapter 6 More Multiplication Facts** • 6-11 Multiply by Multiples of 10—pp. 134–135
NY-3.NBT.4	
NY-3.NBT.4a Understand that the four digits of a four-digit number represent amounts of thousands, hundreds, tens, and ones. e.g., 3,245 equals 3 thousands, 2 hundreds, 4 tens, and 5 ones. *continued*	**Chapter 1 Number Sense** • 1-1 Read and Write Multi-Digit Numbers—pp. 2–3

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NY-3.NBT — NUMBER AND OPERATIONS IN BASE TEN

Grade 3 Content Standards	*Sadlier Math*, Grade 3
NY-3.NBT.4b Read and write four digit numbers using base-ten numerals, number names and expanded form. e.g., The number 3,245 in expanded form can be written as 3,245 = 3,000 + 200 + 40 + 5.	

NY-3.NF — NUMBER AND OPERATION—FRACTIONS

Grade 3 Content Standards	*Sadlier Math*, Grade 3

Develop understanding of fractions as numbers.

Grade 3 Content Standards	*Sadlier Math*, Grade 3
NY-3.NF.1 Understand a unit fraction, $\frac{1}{b}$, is the quantity formed by 1 part when a whole is partitioned into b equal parts. Understand a fraction $\frac{a}{b}$ as the quantity formed by a parts of size $\frac{1}{b}$. Note: Fractions are limited to those with denominators 2, 3, 4, 6, and 8.	**Chapter 9 Fraction Concepts** • 9-1 Understand Equal Parts—pp. 188–189 • 9-2 Name Unit Fractions of a Whole—pp. 190–191 • 9-4 Name Fractions of a Whole—pp. 196–197

NY-3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line.

Grade 3 Content Standards	*Sadlier Math*, Grade 3
NY-3.NF.2a Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line.	**Chapter 9 Fraction Concepts** • 9-3 Find Unit Fractions on a Number Line—pp. 192–193

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NY-3.NF   NUMBER AND OPERATION—FRACTIONS

Grade 3 Content Standards	*Sadlier Math*, Grade 3
NY-3.NF.2b Represent a fraction $\frac{a}{b}$ on a number line diagram by marking off a lengths $\frac{1}{b}$ from 0. Recognize that the resulting interval has size $\frac{a}{b}$ and that its endpoint locates the number $\frac{a}{b}$ on the number line.	**Chapter 9 Fraction Concepts** • 9-5 Find Fractions on a Number Line—pp. 198–199

NY-3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

Note: Fractions are limited to those with denominators 2, 3, 4, 6, and 8.

NY-3.NF.3a Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	**Chapter 10 Fractions: Comparison and Equivalence** • 10-2 Find Equivalent Fractions—pp. 212–213 • 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215
NY-3.NF.3b Recognize and generate simple equivalent fractions. e.g., $\frac{1}{2} = \frac{2}{4}$, $\frac{4}{6} = \frac{2}{3}$ Explain why the fractions are equivalent. e.g., using a visual fraction model	**Chapter 10 Fractions: Comparison and Equivalence** • 10-2 Find Equivalent Fractions—pp. 212–213 • 10-3 Find Equivalent Fractions on a Number Line—pp. 214–215
NY-3.NF.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. e.g., Express 3 in the form $3 = \frac{3}{1}$, recognize that $\frac{6}{3} = 2$, and locate $\frac{4}{4}$ and 1 at the same point of a number line diagram.	**Chapter 9 Fraction Concepts** • 9-6 Use a Fraction to Find the Whole—pp. 200–201 **Chapter 10 Fractions: Comparison and Equivalence** • 10-1 Whole Numbers and Fractions—pp. 210–211

NY-3.NF — NUMBER AND OPERATION—FRACTIONS

Grade 3 Content Standards	*Sadlier Math*, Grade 3
NY-3.NF.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions. e.g., using a visual fraction model.	**Chapter 10 Fractions: Comparison and Equivalence** • 10-4 Compare Fractions with the Same Denominator—pp. 218–219 • 10-5 Compare Fractions with the Same Numerator—pp. 220–221 • 10-6 Order Fractions—pp. 222–223

NY-3.MD — MEASUREMENT AND DATA

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	
NY-3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve one-step word problems involving addition and subtraction of time intervals in minutes. e.g., representing the problem on a number line or other visual model. Note: This includes one-step problems that cross into a new hour.	**Chapter 13 Time** • 13-1 Tell Time to the Minute—pp. 276–277 • 13-2 Measure Elapsed Time—pp. 278–279 • 13-3 Find Start and End Times—pp. 282–283 • 13-4 Operations with Time—pp. 284–285
NY-3.MD.2	
NY-3.MD.2a Measure and estimate liquid volumes and masses of objects using grams (g), kilograms (kg), and liters (l). Note: Does not include compound units such as cm³ and finding the geometric volume of a container. **NY-3.MD.2b** Add, subtract, multiply, or divide to solve one-step word problems involving masses or liquid volumes that are given in the same units. *continued*	**Chapter 11 Measurement** • 11-2 Estimate and Measure Liquid Volume—pp. 234–235 • 11-3 Operations with Liquid Volume—pp. 236–237 • 11-4 Estimate and Measure Mass—pp. 240–241 • 11-5 Operations with Mass—pp. 242–243

NY-3.MD   MEASUREMENT AND DATA

Grade 3 Content Standards	*Sadlier Math*, Grade 3
e.g., using drawings (such as a beaker with a measurement scale) to represent the problem. Note: Does not include multiplicative comparison problems involving notions of "times as much."	

Represent and interpret data.

NY-3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in a scaled picture graph or a scaled bar graph. e.g., Draw a bar graph in which each square in the bar graph might represent 5 pets.	**Chapter 12 Data** • 12-1 Read Picture Graphs—pp. 252–253 • 12-2 Make Picture Graphs—pp. 254–255 • 12-3 Read Bar Graphs—pp. 256–257 • 12-4 Make Bar Graphs—pp. 258–259 • 12-5 Data and Two-Step Problems—pp. 260–261
NY-3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	**Chapter 11 Measurement** • 11-1 Measure Length—pp. 232–233 **Chapter 12 Data** • 12-7 Read Line Plots—pp. 266–267 • 12-8 Make Line Plots—pp. 268–269

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

NY-3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.	
NY-3.MD.5a Recognize a square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.	**Chapter 15 Area** • 15-1 Understand Area—pp. 312–313
NY-3.MD.5b Recognize a plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.	**Chapter 15 Area** • 15-1 Understand Area—pp. 312–313

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NY-3.MD	MEASUREMENT AND DATA
Grade 3 Content Standards	*Sadlier Math*, Grade 3
NY-3.MD.6 Measure areas by counting unit squares. Note: Unit squares include square cm, square m, square in., square ft., and improvised units.	**Chapter 15 Area** • 15-1 Understand Area—pp. 312–313 • 15-2 Find Area Using Standard Units—pp. 314–315 • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317
NY-3.MD.7 Relate area to the operations of multiplication and addition.	
NY-3.MD.7a Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	**Chapter 15 Area** • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317
NY-3.MD.7b Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	**Chapter 15 Area** • 15-3 Find the Area of a Rectangle and a Square—pp. 316–317
NY-3.MD.7c Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.	**Chapter 15 Area** • 15-4 Find Area Using the Distributive Property—pp. 320–321
NY-3.MD.7d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems. Note: Problems include no more than one unknown side length.	**Chapter 15 Area** • 15-5 Find Area of Composite Shapes—pp. 322–323

NY-3.MD — MEASUREMENT AND DATA

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	
NY-3.MD.8	
NY-3.MD.8a Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths or finding one unknown side length given the perimeter and other side length.	**Chapter 16 Perimeter** • 16-1 Understand Perimeter—pp. 332–333 • 16-2 Find Perimeter—pp. 334–335 • 16-3 Find Unknown Side Lengths—pp. 336–337 • 16-5 Same Perimeter, Different Areas—pp. 342–343 • 16-6 Same Area, Different Perimeter—pp. 344–345
NY-3.MD.8b Identify rectangles with the same perimeter and different areas or with the same area and different perimeters.	**Chapter 16 Perimeter** • 16-5 Same Perimeter, Different Areas—pp. 342–343 • 16-6 Same Area, Different Perimeter—pp. 344–345

NY-3.G — GEOMETRY

Grade 3 Content Standards	*Sadlier Math*, Grade 3
Reason with shapes and their attributes.	
NY-3.G.1 Recognize and classify polygons based on the number of sides and vertices (triangles, quadrilaterals, pentagons, and hexagons). Identify shapes that do not belong to one of the given subcategories. Note: Include both regular and irregular polygons, however, students need not use formal terms "regular" and "irregular," e.g., students should be able to classify an irregular pentagon as "a pentagon," but do not need to classify it as an "irregular pentagon."	**Chapter 14 Two-Dimensional Shapes** • 14-1 Classify Polygons—pp. 294–295 • 14-2 Classify Quadrilaterals—pp. 296–297 • 14-3 Draw Quadrilaterals—pp. 298–299

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NY-3.G	GEOMETRY
Grade 3 Content Standards	*Sadlier Math*, Grade 3
NY-3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. e.g., Partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.	**Chapter 9 Fraction Concepts** • 9-1 Understand Equal Parts—pp. 188–189 **Chapter 15 Area** • 15-2 Find Area Using Standard Units—pp. 314–315

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