A Grade 5 Crosswalk

Progress in Mathematics

Aligned to



Sadlier Math[™]

And the

New York State Next Generation Mathematics Learning Standards (2017)

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Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
 <u>Chapter 1</u> Place Value, Addition and Subtraction 1-1 Place Value to Billions—pp. 2-3 (Understand place value through billions.) 1-2 Expanded Form—pp. 4-5 (Read and write whole numbers through billions in expanded form.) 	Chapter 1 Place Value, Addition, and Subtraction • 1-1 What Is a Billion?—pp. 30-31 • 1-2 Place Value to Billions—pp. 32-33 • 1-3 Expanded Form—pp. 34-35	NY-5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1 of what it represents in the place to its left.
• 1-3 Powers of 10—pp. 8-9 (Multiply and divide whole numbers by powers of 10.)	• 1-3A Powers of Ten—Online	NY-5.NBT.2 Use whole-number exponents to denote powers of 10. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10.
 1-4 Problem Solving: Use the Four-Step Process—pp. 10-11 (Solve problems by using the four-step process.) 	Introduction to Problem Solving Problem-Solving Model—pp. 22-23	 MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.6 Attend to precision.
 1-5 Addition Properties and Subtraction Rules—pp. 12-13 (Use addition properties and subtraction rules to add and subtract multi-digit numbers.) 1-6 Estimate Sums and Differences—pp. 14-15 (Use front-end estimation and rounding to estimate sums and differences of multi-digit numbers.) 1-7 Find Sums and Differences—pp. 16-17 (Add and subtract multidigit numbers.) 	 <u>Chapter 1</u> Place Value, Addition, and Subtraction 1-8 Addition Properties/Subtraction Rules—pp. 44-45 1-9 Estimate Sums and Differences—pp. 46-47 1-10 Addition: Three or More Addends—pp. 48-49 1-11 Subtraction with Zeros—pp. 50-51 1-12 Larger Sums and Differences—pp. 52-53 	NY-5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.





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 <u>Chapter 2</u> Place Value and Decimals 2-1 Thousandths—pp. 24-25 (Read and write decimals to thousandths using standard form and word form.) 2-2 Decimals and Expanded Form—pp. 26-27 (Read and write decimals to thousandths using expanded form.) 	 <u>Chapter 1</u> Place Value, Addition, and Subtraction 1-4 Thousandths—pp. 36–37 1-4A Decimals and Expanded Form—Online 	NY-5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1 of what it represents in the place to its left. NY-5.NBT.3a Read, write, and compare decimals to thousandths.
• 2-3 Compare and Order Decimals—pp. 30-31 (Compare and order decimals using symbols to record the comparison.)	• 1-6 Compare and Order Numbers—pp. 40-41	 NY-5.NBT.3a Read, write, and compare decimals to thousandths. NY-5.NBT.3b Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
• 2-4 Round Decimals—pp. 32-33 (Use place value to round decimal numbers.)	• 1-7 Rounding Numbers—pp. 42-43	NY-5.NBT.4 Use place value understanding to round decimals to any place.
• 2-5 Problem Solving: Use Logical Reasoning— pp. 34–35 (Use logical reasoning to solve problems.)	Introduction to Problem Solving Logical Reasoning—p. 24 	 MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision.
 2-6 Estimate with Decimals—pp. 36-37 (Use front-end estimation and rounding to estimate sums and differences of decimals.) 	Chapter 8 Decimals: Addition and Subtraction • 8-4 Estimate Decimal Sums—pp. 274-275 • 8-7 Estimate Decimal Differences—pp. 280-281	 NY-5.NBT.4 Use place value understanding to round decimals to any place. NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: add and subtract decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.



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 <u>Chapter 3</u> Multiplication 3-1 Multiplication Properties—pp. 44-45 (Use multiplication properties to compare and evaluate expressions.) 	 <u>Chapter 2</u> Multiplication 2-1 Factors and Products—pp. 66-67 2-2 Properties of Multiplication—pp. 68-69 	NY-4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/ or area models.
 3-2 Multiplication Patterns—pp. 46-47 (Use patterns to multiply whole numbers by multiples of 10, 100, and 1000.) 3-3 Estimate Products—pp. 48-49 (Estimate products of whole numbers.) 	 2-4 Patterns in Multiplication—pp. 72-73 2-5 Estimate Products—pp. 74-75 	NY-5.NBT.2 Use whole-number exponents to denote powers of 10. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10.
 3-4 Zeros in the Multiplicand—pp. 50-51 (Multiply multidigit numbers by 1-digit numbers.) 3-5 Multiply by Two-Digit Numbers—pp. 54-55 (Multiply a whole number by a 2-digit multiplier.) 	 2-6 Zeros in the Multiplicand—pp. 76-77 2-7 Multiply Two Digits—pp. 78-79 	NY-5.NBT.5 Fluently multiply multi-digit whole numbers using a standard algorithm.
 3-6 Problem Solving: Guess and Test—pp. 56-57 (Use the guess and test strategy to solve problems.) 	 <u>Chapter 1</u> Place Value, Addition, and Subtraction 1-14 Problem Solving Strategy: Guess and Test— pp. 56–57 	 MP.1 Make sense of problems and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision.
 3-7 Multiply by Three-Digit Numbers—pp. 58-59 (Multiply a whole number by a 3-digit number.) 3-8 Zeros in the Multiplier—pp. 60-61 (Multiply multi-digit whole numbers with zeros in the multiplier.) 	 <u>Chapter 2</u> Multiplication 2-7 Multiply Two Digits—pp. 78-79 2-8 Multiply Three Digits—pp. 80-81 2-9 Zeros in the Multiplier—pp. 82-83 	NY-5.NBT.5 Fluently multiply multi-digit whole numbers using a standard algorithm.



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 Chapter 4 Division 4-1 Division Patterns—pp. 68-69 (Use patterns to divide whole numbers by multiples of 10, 100, or 1000.) 4-2 Estimation: Compatible Numbers—pp. 70-71 (Use compatible numbers to estimate quotients.) 4-3 Divide by One-Digit Numbers—pp. 72-73 (Find whole-number quotients of whole numbers with 4-digit dividends and 1-digit divisors.) 4-4 Zeros in the Quotient—pp. 74-75 (Divide by one-digit divisors to find quotients with zeros.) 4-5 Divisibility and Mental Math—pp. 76-77 (Use divisibility rules to mentally determine one-digit factors.) 4-6 Use Arrays and Area Models to Divide—pp. 80-81 (Use arrays and area models to illustrate the process of division.) 4-7 Use Strategies to Divide—pp. 82-83 (Use strategies based on the relationship between multiplication and division to divide.) 4-8 Divide by Two-Digit Numbers—pp. 84-85 (Use a standard algorithm to divide numbers with up to 4 digits by two-digit divisors.) 	Chapter 3 Division 3-1 Understanding Division—pp. 96-97 3-2 Division Patterns—pp. 98-99 3-3 Three-Digit Quotients—pp. 100-101 3-4 Larger Quotients—pp. 102-103 3-5 Zeros in the Quotient—pp. 104-105 3-6 Short Division—pp. 106-107 3-7 Explore Divisibility—pp. 108-109 3-8 Divisibility and Mental Math—pp. 110-111 3-9 Estimation Compatible Numbers—pp. 112-113 3-9A Use Arrays to Divide—Online 3-10 Teens as Divisors—pp. 114-115 3-10A Use Strategies to Divide—Online 3-11 Two-Digit Divisors—pp. 116-117 3-12 Divide Larger Numbers—pp. 118-119	NY-5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/ or area models.
 4-9 Problem Solving: Work Backward—pp. 86-87 (Focus on working backward to solve problems.) 	 <u>Chapter 5</u> Fractions: Addition and Subtraction 5-13 Problem Solving Strategy: Work Backward— pp. 188–189 	 MP.1 Make sense of problems and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision
 4-10 Order of Operations—pp. 88-89 (Use parentheses and brackets in numerical expressions and evaluate expressions using the order of operations.) 	Chapter 3 Division • 3-14 Order of Operations—pp. 122-123	NY-5.OA.1 Apply the order of operations to evaluate numerical expressions.



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Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
• 4-11 Expressions—pp. 90-91 (Write, evaluate, and compare numerical expressions.)	• 3-14A Variables and Expressions—Online	NY-5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them
Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
 <u>Chapter 5</u> Number Theory and Fractions 5-1 Factors, Primes and Composite Numbers— pp. 98–99 (Find the prime factorization of a number.) 	<u>Chapter 4</u> Number Theory and Fractions 4-2 Factors, Primes, and Composites—pp. 136–137	Review of Grade 4 NY-4.0A.4 Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.
 5-2 Common Factors—pp. 100–101 (List the common factors and find the greatest common factor (GCF) of two or more numbers.) 	• 4-3 Greatest Common Factor—pp. 138-139	Readiness for Grade 6 NY-6.NS.4 Find the greatest common factor of two whole numbers less than or equal to 100. Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor other than 1. Find the least common multiple of two whole numbers less than or equal to 12.
 5-3 Estimation and Equivalent Fractions—pp. 102-103 (Determine if a fraction is closer to 0, 1/2, or 1. Find equivalent fractions.) 5-4 Common Multiples and Common Denominators—pp. 106-107 (List the common multiples and find the least common multiple of a set of numbers. Find the least common denominator of a set of fractions.) 	 4-4 Fraction Sense (Finding Equivalent Fractions)—pp. 140–141 4-5 Fractions in Lowest Terms—pp. 142–143 4-6 Fractions in Greater Terms—pp. 144–145 4-7 Multiples: LCM and LCD—pp. 146–147 	 NY-5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. NY-5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.





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• 5-5 Problem Solving: Make a Table—pp. 108-109 (Solve problems by making tables.)	 <u>Chapter 3</u> Division 3-15 Problem Solving Strategy: Make a Table/ Find a Pattern—pp. 124-125 	 MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics MP.6 Attend to precision
• 5-6 Fractions Greater Than or Equal to One—pp. 110-111 (Identify improper fractions. Rename improper fractions as a whole or mixed number.)	 <u>Chapter 4</u> Number Theory and Fractions 4-9 Fractions Greater Than or Equal to One—pp. 150–151 	Review of Grade 4 NY-4.NF.3c Add and subtract mixed numbers with like denominators.
 5-7 Compare and Order Fractions and Mixed Numbers—pp. 112-113 (Compare and order fractions and mixed numbers.) 	• 4-10 Compare and Order Fractions—pp. 152-153	Review of Grade 4 NY-4.NF.2 Compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions.
• 5-8 Interpret a Remainder—pp. 114-115 (Interpret a fraction as a division, and solve word problems involving fractions and mixed numbers.)	 <u>Chapter 6</u> Fractions: Multiplication and Division 6-7A Interpret the Remainder—Online 	NY-5.NF.3 Interpret a fraction as division of the numerator by the denominator $(a/b = a \div b)$. Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.
Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
 <u>Chapter 6</u> Fractions: Addition 6-1 Model Addition with Unlike Denominators— pp. 122-123 (Use models to add fractions with unlike denominators.) 6-2 Add Fractions: Unlike Denominators— pp. 124-125 (Add fractions with unlike denominators.) 6-3 Fraction Addition: Estimation and Reasonableness—pp. 126-127 (Use benchmarks <i>continued on next page</i> 	 <u>Chapter 5</u> Fractions: Addition and Subtraction 5-1A Add Fractions with Unlike Denominators— Online 5-2 Add Fractions: Unlike Denominators—pp. 166-167 5-3 Add Three Fractions—pp. 168-169 5-4 Add Mixed Numbers—pp. 170-171 5-5 Rename Mixed Number Sums—pp. 172-173 5-9A Use Benchmark Fractions—Online 	 NY-5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. NY-5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.



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Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
 continued from previous page and number sense to estimate and check answers involving fractions.) 6-4 Add Mixed Numbers—pp. 130-131 (Add mixed numbers with unlike denominators.) 6-6 Rename Mixed Number Sums—pp. 134-135 (Add mixed numbers and simplify the sum.) 		
 6-5 Problem Solving: Use a Model—pp. 132-133 (Focus on using a model to solve problems.) 	 <u>Chapter 7</u> Probability and Statistics 7-11 Problem Solving Strategy: Use a Model/ Diagram—pp. 258-259 	 MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics MP.6 Attend to precision
Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
 Chapter 7 Fractions: Subtraction 7-1 Model Subtraction of Fractions with Unlike Denominators—pp. 142-143 (Use models to subtract fractions with unlike denominators.) 7-2 Subtract Fractions: Unlike Denominators— pp. 144-145 (Subtract fractions with unlike denominators.) 7-3 Subtract Fractions: Estimation and Reasonableness—pp. 146-147 (Use benchmark fractions to assess the reasonableness of answers.) 7-4 Model Subtraction with Mixed Numbers— pp. 150-151 (Use models to subtract with mixed numbers.) 7-5 Estimate Sums and Differences of Mixed Numbers—pp. 152-153 (Use rounding and frontend estimation to estimate sums and differences of mixed numbers.) 7-6 Subtract Fractions and Whole Numbers from Mixed Numbers—pp. 154-155 (Subtract <i>continued on next page</i> 	 Chapter 5 Fractions: Addition and Subtraction 5-6A Subtract Fractions with Unlike Denominators—Online 5-7 Subtract Fractions: Unlike Denominators— pp. 176–177 5-8 More Subtraction of Fractions—pp. 178–179 5-8A Subtract Fractions and Whole Numbers from Mixed Numbers—Online 5-9 Subtract Mixed Numbers—pp. 180–181 5-9A Use Benchmark Fractions—Online 5-10 Subtraction with Renaming—pp. 182–183 5-11 More Renaming in Subtraction—pp. 184–185 5-12 Estimate Sums and Differences of Mixed Numbers—pp. 186–187 	NY-5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. NY-5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.





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 continued from previous page whole numbers and proper fractions from mixed numbers.) 7-7 Subtract Mixed Numbers: Rename Fractions—pp. 156-157 (Subtract mixed numbers with like or unlike denominators.) 7-8 Subtract Mixed Numbers: Rename Whole Numbers and Fractions—pp. 158-159 (Subtract mixed numbers by renaming whole numbers and fractions.) 		
 7-9 Problem Solving: Write and Solve an Equation—pp. 160–161 (Focus on writing and solving equations to solve problems.) 	 <u>Chapter 14</u> More Concepts in Algebra 14-16 Problem Solving Strategy: Write an Equation—pp. 470-471 	 MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics MP.6 Attend to provision
		MP.0 Attend to precision
Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
Sadlier Math, Grade 5 <u>Chapter 8</u> Fractions: Multiplication • 8-1 Model Multiplying Fractions—pp. 168-169 (Use models to multiply a whole number or fraction by a fraction.)	Progress in Mathematics, Grade 5 Chapter 6 Fractions: Multiplication and Divisions • 6-1 Multiply Fractions—pp. 198–199	Next Gen Mathematics Learning Standards NY-5.NF.4a Interpret the product a/b × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b.





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 8-4 Scaling Fractions—pp. 174-175 (Understand how the value of one factor affects the size of the product.) 	• 6-2B Scaling Fractions—Online	 NY-5.NF.5a Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. NY-5.NF.5b Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case). Explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number. Relate the principle of fraction equivalence a/b = a/b × n/n to the effect of multiplying a/b by 1.
• 8-5 Common Factors in Products—pp. 176-177 (Divide common factors before multiplying fractions.)	 6-4 Multiply Fractions Using the GCF—pp. 204-205 	NY-5.NF.4a Interpret the product $a/b \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.
 8-6 Rename Mixed Numbers as Fractions—pp. 180-181 (Rename mixed numbers as improper fractions.) 8-7 Estimate Products with Mixed Numbers—pp. 182-183 (Use rounding and compatible numbers to estimate products of mixed numbers.) 	 6-5 Rename Mixed Numbers as Fractions—pp. 206-207 	 NY-5.NF.3 Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers. NY-5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers.
 8-8 Multiply Fractions and Mixed Numbers—pp. 184-185 (Multiply fractions and mixed numbers.) 8-9 Multiply Mixed Numbers—pp. 186-187 (Multiply mixed numbers by mixed numbers and whole numbers.) 	 6-6 Multiply Fractions and Mixed Numbers—pp. 208-209 6-7 Multiply Mixed Numbers—pp. 210-211 	 NY-5.NF.4a Interpret the product a/b × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b. NY-5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers.







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• 8-10 Find the Area of a Rectangle—pp. 188-189 (Use tiling or a formula to find the area of a rectangle with fractional side lengths.)	 <u>Chapter 12</u> Metric Measurement, Area, and Volume 12-6 Areas of Rectangles and Squares—pp. 392–393 	NY-5.NF.4b Find the area of a rectangle with fractional side lengths by tiling it with rectangles of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
 8-11 Problem Solving: Use Logical Reasoning— pp. 190–191 (Use logical reasoning to solve problems.) 	 Introduction to Problem Solving Logical Reasoning—p. 24 	 MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision.
Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
 <u>Chapter 9</u> Fractions: Division 9-1 Divide Whole Numbers by Unit Fractions— pp. 198-199 (Divide whole numbers by unit fractions.) 9-2 Reciprocals—pp. 200-201 (Determine the reciprocal of a fraction or whole number.) 9-3 Divide Whole Numbers by Fractions—pp. 202-203 (Divide a whole number by a fraction.) 	 <u>Chapter 6</u> Fractions: Multiplication and Division 6-8 Division of Fractions—pp. 212-213 6-9 Reciprocals—pp. 214-215 6-10 Divide Whole Numbers by Fractions—pp. 216-217 	NY-5.NF.7b Interpret division of a whole number by a unit fraction, and compute such quotients.
 9-4 Divide Unit Fractions by Whole Numbers— pp. 206-207 (Divide a fraction by a whole number.) 9-5 Divide Fractions by Whole Numbers—pp. 208-209 (Divide a fraction by a whole number.) 	 6-10A Division with a Unit Fraction—Online 6-12 Divide Fractions by Whole Numbers—pp. 220-221 	NY-5.NF.7a Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.
 9-6 Word Problems Involving Fraction Division— pp. 210-211 (Solve problems that involve dividing with fractions.) 	 6-10B Word Problems Involving Fractions— Online 6-11 Divide Fractions by Fractions—pp. 218–219 	NY-5.NF.7c Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions.



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 9-7 Problem Solving: More Than One Way—pp. 212–213 (Use more than one strategy to solve a problem.) 		 MP.1 Make sense of problems and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision
Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
 <u>Chapter 10</u> Decimals: Addition 10-1 Use Models to Add Decimals—pp. 220-221 (Use base-ten models to add decimals.) 10-2 Use Properties to Add Decimals—pp. 222-223 (Use properties and strategies to add decimals.) 	<u>Chapter 8</u> Decimals: Addition and Subtraction • 8-1 Decimal Sense—pp. 268-269 • 8-2 Decimals and Place Value—pp. 270-271 • 8-2A Use Models to Add Decimals—Online • 8-2B Mental Math Add Decimals—Online	 NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: add and subtract decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.
• 10-3 Estimate Decimal Sums—pp. 224-225 (Use front-end estimation and rounding to estimate decimal sums.)	• 8-4 Estimate Decimal Sums—pp. 274-275	 NY-5.NBT.4 Use place value understanding to round decimals to any place. NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: add and subtract decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.
• 10-4 Problem Solving: Draw a Picture—pp. 228-229 (Solve problems by drawing pictures.)	 <u>Chapter 122</u> Metric Measurement, Area, and Volume 12-13 Problem Solving Strategy: Draw a Picture— pp. 406-407 	 MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics MP.6 Attend to precision



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 10-5 Add Decimals: Hundredths—pp. 230-231 (Use an algorithm to add decimals to hundredths.) 10-6 Add Decimals: Thousandths—pp. 232-233 (Use an algorithm to add decimals to thousandths.) 10-7 Addition with Money—pp. 234-235 (Use estimation, models, and addition strategies to add amounts of money.) 	• 8-5 Add More Decimals—pp. 276-277	 NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: add and subtract decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.
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Chapter 11 Decimals: Subtraction • 11-1 Use Models to Subtract Decimals—pp. 242- 243 (Use concrete models to subtract decimals.) • 11-2 Estimate Decimal Differences—pp. 244-245 (Estimate decimal differences.)	Chapter 8 Decimals: Addition and Subtraction • 8-5A Use Models to Subtract Decimals—Online • 8-7 Estimate Decimal Differences—pp. 280-281	 NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: add and subtract decimals to hundredths. Relate the strategy to a written method and explain the reasoning used. NY-5.NBT.4 Use place value understanding to round decimals to any place. NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: add and subtract decimals to hundredths.
 11-3 Subtract Decimals: Hundredths—pp. 248-249 (Subtract decimals through hundredths.) 11-4 Subtract Decimals: Thousandths—pp. 250-251 (Subtract decimals through thousandths.) 11-5 Subtraction with Money—pp. 252-253 (Use estimation and addition strategies to subtract with money.) 	 8-6 Subtract Decimals—pp. 278-279 8-8 Subtract More Decimals—pp. 282-283 	 NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: add and subtract decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.





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• 11-6 Problem Solving: Use a Model—pp. 254-255 (Use a diagram to represent the situation when solving a problem.)	 <u>Chapter 7</u> Statistics and Probability 7-11 Problem Solving Strategy: Use a Model/ Diagram—pp. 258-259 	 MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics MP.6 Attend to precision
Sadlier Math, Grade 5	Progress in Mathematics, Grade 5	Next Gen Mathematics Learning Standards
 <u>Chapter 12</u> Decimals: Multiplication 12-1 Multiply by Powers of 10—pp. 262-263 (Observe and use patterns of zeros when multiplying by a power of 10.) 	Chapter 9 Decimals: Multiplication and Division • 9-1 Multiply by 10, 100, and 1000—pp. 294–295	NY-5.NBT.2 Use whole-number exponents to denote powers of 10. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10.
 12-2 Use Properties to Multiply a Decimal by a Whole Number—pp. 264-265 (Use properties of multiplication to multiply a decimal by a whole number.) 12-3 Estimate Decimal Products—pp. 266-267 (Estimate decimal products.) 12-4 Multiply Decimals by Whole Numbers—pp. 268-269 (Multiply decimals to hundredths using models and strategies.) 12-5 Multiplication with Money—pp. 270-271 (Multiply money amounts using the place-value algorithm.) 12-6 Model Multiplying Two Decimals—pp. 274-275 (Use models to multiply a decimal by a decimal.) 12-7 Multiply Decimals by Decimals—pp. 276-277 (Multiply a decimal number by another decimal number.) 12-8 Zeros in the Product—pp. 278-279 (Write zeros as placeholders in decimal products.) 	 9-2 Estimate Decimal Products—pp. 296-297 9-3 Multiply Decimals by Whole Numbers—pp. 298-299 9-3A Model Multiplying Two Decimals—Online 9-4 Multiply Decimals by Decimals—pp. 300-301 9-5 Zeros in the Product—pp. 302-303 	NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: • multiply and divide decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.

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• 12-9 Problem Solving: More Than One Way—pp. 280-281 (Use more than one way to solve a problem.)	 Introduction to Problem Solving Problem-Solving Applications: Mixed Review: Use These Strategies—p. 28 	 MP.1 Make sense of problems and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision
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 <u>Chapter 13</u> Decimals: Division 13-1 Divide by Powers of 10—pp. 288-289 (Divide decimals and whole numbers by powers of 10.) 	<u>Chapter 9</u> Decimals: Multiplication and Division • 9-6 Divide by 10, 100, and 1000—pp. 304-305	NY-5.NBT.2 Use whole-number exponents to denote powers of 10. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10.
• 13-2 Model Dividing a Decimal by a Whole Number—pp. 290-291 (Model division of a decimal by a whole number.)	• 9-6A Model Dividing a Decimal by a Whole Number—Online	 NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: multiply and divide decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.
 13-3 Estimate Decimal Quotients—pp. 292-293 (Estimate decimal quotients.) 13-4 Estimate with Money—pp. 294-295 (Estimate quotients of money amounts.) 	• 9-9 Estimate Decimal Quotients—pp. 310-311	 NY-5.NBT.3b Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. NY-5.NBT.4 Use place value understanding to round decimals to any place.
 13-5 Divide Decimals by Whole Numbers—pp. 296-297 (Divide decimals by whole numbers.) 13-6 Zeros in Decimal Quotients—pp. 298-299 (Divide decimals using zeros as placeholders.) 13-7 Division with Money—pp. 302-303 (Divide money amounts.) 	 9-7 Divide Decimals by Whole Numbers—pp. 306-307 9-8 Zeros in Division—pp. 308-309 9-8A Model Dividing a Decimal by a Decimal— Online 9-8B Divide Decimals—Online 	 NY-5.NBT.7 Using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between operations: multiply and divide decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.







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 continued from previous page 13-9 Model Dividing a Decimal by a Decimal—pp. 306-307 (Use a model to divide a decimal by a decimal.) 13-10 Divide a Decimal by a Decimal—pp. 308-309 (Divide by a decimal.) 		
 13-8 Problem Solving: Work Backward—pp. 304-305 (Use the Work Backward strategy to solve problems.) 	<u>Chapter 5</u> Fractions: Addition and Subtraction 5-13 Problem Solving Strategy: Work Backward—pp. 188-189	 MP.1 Make sense of problems and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision
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 <u>Chapter 14</u> Measurement 14-1 Relate Customary Units of Length—pp. 316-317 (Convert customary units of length.) 14-2 Relate Customary Units of Capacity—pp. 318-319 (Convert customary units of capacity) 14-3 Relate Customary Units of Weight—pp. 320-321 (Convert customary units of weight.) 14-4 Compute with Customary Units—pp. 322- 323 (Use computation skills to solve problems involving customary units.) 14-5 Relate Metric Units of Length—pp. 326-327 (Convert metric units of length.) 14-6 Relate Metric Units of Capacity—pp. 328- 329 (Convert metric units of capacity.) 14-7 Relate Metric Units of Mass—pp. 330-331 (Convert metric units of mass.) 14-8 Compute with Metric Units—pp. 332-333 (Use computation skills to solve problems involving metric units.) 	 <u>Chapter 11</u> Measurement Topics 11-1 Relate Customary Units of Length—pp. 358-359 11-2 Relate Customary Units of Capacity—pp. 360-361 11-3 Relate Customary Units of Weight—pp. 362-363 11-7 Compute with Customary Units—pp. 370-371 <u>Chapter 12</u> Metric Measurement, Area, and Volume 12-2 Relate Metric Units of Length—pp. 384-385 12-3 Relate Metric Units of Capacity—pp. 386- 387 12-4 Relate Metric Units of Mass—pp. 388-389 	NY-5.MD.1 Convert among different-sized standard measurement units within a given measurement system when the conversion factor is given. Use these conversions in solving multi-step, real world problems.





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• 14-9 Problem Solving: Use a Picture—pp. 334–335 (Use information in a picture and apply the four-step problem-solving process.)	 12-13 Problem Solving Strategy: Draw a Picture— pp. 406-407 	 MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics MP.6 Attend to precision
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• 15-1 Polygons—pp. 342–343 (Understand and use attributes of polygons.)	Unit 5 Geometry • 10-3 Polygons—pp. 328–329	NY-5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.
 15-2 Triangles—pp. 344-345 (Understand and use attributes of triangles.) 15-3 Quadrilaterals—pp. 348-349 (Understand and use attributes of quadrilaterals.) 15-4 Classify Quadrilaterals—pp. 350-351 (Classify quadrilaterals in a hierarchy based on their properties.) 	 10-5 Triangles—pp. 332-333 10-6 Quadrilaterals—pp. 334-335 10-6A Classify Quadrilaterals—Online 	 NY-5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. NY-5.G.4 Classify two-dimensional figures in a hierarchy based on properties.
• 15-5 Problem Solving: Use a Model—pp. 352- 353 (Use models to represent and organize information while solving problems.)	 10-13 Problem Solving Strategy: Use a Diagram/ Model—pp. 348-349 	MP.1 Make sense of problems and persevere in solving them.MP.4 Model with mathematicsMP.6 Attend to precision
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 <u>Chapter 16</u> Volume 16-1 Solid Figures—pp. 360-361 (Identify solid figures and their attributes. Relate plane and solid figures to identify nets for solid figures.) 	Chapter 12 Metric Measurement, Area, and Volume • 12-8 Solid Figures—pp. 396–397	NY-5.MD.3a Recognize that a cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.







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• 16-2 Cubic Measure—pp. 362-363 (Describe and use cubic measures.)	• 12-10 Cubic Measure—pp. 400-401	 NY-5.MD.3a Recognize that a cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. NY-5.MD.3b Recognize that a solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units. NY-5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
• 16-3 Volume of Rectangular Prisms—pp. 364- 365 (Find volume by packing with unit cubes.)	• 12-11 Volume—pp. 402-403	 NY-5.MD.3a Recognize that a cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume. NY-5.MD.3b Recognize that a solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units. NY-5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. NY-5.MD.5a Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base.
 16-4 Volume Formulas—pp. 368-369 (Use formulas to find the volumes of rectangular prisms.) 	• 12-11A Find Volume—Online	NY-5.MD.5b Apply the formulas V = I × w × h and V = B × h for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.







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• 16-5 Volume of Composite Figures—pp. 370–371 (Find the volume of a solid figure composed of rectangular prisms.)	• 12-11B Separate Solid Figures—Online	NY-5.MD.5c Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non- overlapping parts, applying this technique to solve real world problems.
• 16-6 Problem Solving: Act it Out—pp. 372-373 (Use the Act It Out strategy to solve problems.)		 MP.1 Make sense of problems and persevere in solving them. MP.4 Model with mathematics MP.6 Attend to precision
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 <u>Chapter 17</u> Graphs and Data 17-1 Line Plots with Whole Numbers and Decimals—pp. 380-381 (Make and use line plots with whole numbers and decimals.) 17-2 Line Plots with Fractions and Mixed Numbers—pp. 382-383 (Make and use line plots with fractions and mixed numbers.) 	Chapter 12 Metric Measurement, Area, and Volume • 12-12A Line Plots—Online	NY-5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots.
• 17-3 The Coordinate Plane—pp. 386-387 (Plot and name ordered pairs on the coordinate plane.)	Chapter 14 More Concepts in Algebra • 14-13 The Coordinate Plane—pp. 464-465	NY-5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond.

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• 17-4 Using Coordinate Graphs—pp. 388-389 (Interpret coordinate graphs.)	• 14-13A Using Coordinate Graphs—Online	NY-5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.
 17-5 Write Number Patterns—pp. 390-391 (Use pattern rules to generate patterns; find rules for given patterns.) 17-6 Graph Number Patterns—pp. 392-393 (Graph ordered pairs from number patterns; Identify relationships between corresponding terms of two patterns.) 	 <u>Chapter 2</u> Multiplication 2-3 Mental Math: Special Factors—pp. 70-71 <u>Chapter 14</u> More Concepts in Algebra 14-15 Functions and Coordinate Graphs—pp. 468-469 14-13B Sequences—Online 14-13C Compare Sequences—Online 	NY-5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.
• 17-7 Problem Solving: Find and Use a Pattern— pp. 394-395 (Find and use patterns to analyze information while solving problems.)	 <u>Chapter 3</u> Division 3-15 Problem Solving Strategy: Make a Table/ Find a Pattern—pp. 124-125 	 MP.1 Make sense of problems and persevere in solving them. MP.6 Attend to precision MP.7 Look for and make use of structure.

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