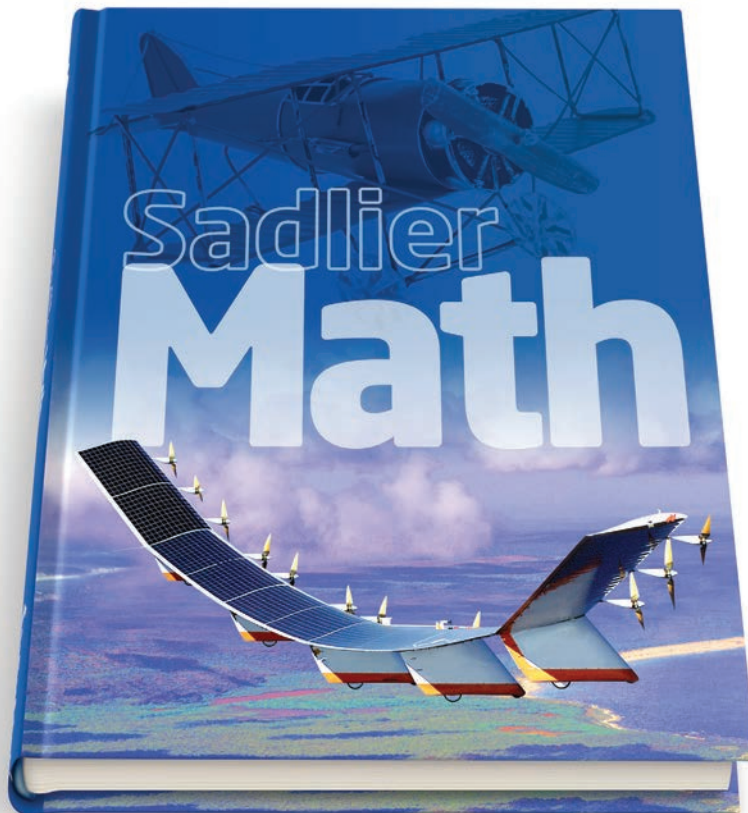


# *Sadlier Math™*

Correlation to the Archdiocese of Louisville  
Mathematics Standards 2019

Grade 5



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**OPERATIONS AND ALGEBRAIC THINKING (OA)**

Grade 5 Content Standards	Sadlier Math, Grade 5
<b>OCS.Math.5.1 Write and interpret numerical expressions and equations.</b>	
<p><b>*OCS.Math.5.1a</b> Differentiate between numeric and algebraic expressions and equations</p>	<p><b>Chapter 4 Division</b></p> <ul style="list-style-type: none"> <li>4-10 Order of Operations (numerical expressions)—pp. 88-89</li> <li>4-11 Expressions (numerical expressions)—pp. 90-91</li> </ul> <p><b>Chapter 7 Fractions: Subtraction</b></p> <ul style="list-style-type: none"> <li>7-9 Problem Solving: Write and Solve an Equation—pp. 160-161</li> </ul> <p><i>See also Grade 6</i></p> <p><b>Chapter 1 Addition and Subtraction Operations and Expressions</b></p> <ul style="list-style-type: none"> <li>1-2 Add Decimals (numerical expression)—pp. 4-5</li> <li>1-4 Write Addition and Subtraction Expressions (algebraic expression)—pp. 10-11</li> </ul>
<p><b>OCS.Math.5.1b</b> Evaluate numerical expressions that use parentheses, brackets, or braces</p>	<p><b>Chapter 1 Place Value, Addition and Subtraction</b></p> <ul style="list-style-type: none"> <li>1-5 Addition Properties and Subtraction Rules (parentheses)—pp. 12-13</li> <li>1-6 Estimate Sums and Differences (parentheses)—pp. 14-15</li> </ul> <p><b>Chapter 2 Place Value and Decimals</b></p> <ul style="list-style-type: none"> <li>2-2 Decimals and Expanded Form (parentheses)—pp. 26-27</li> </ul> <p><b>Chapter 3 Multiplication</b></p> <ul style="list-style-type: none"> <li>3-1 Multiplication Properties (evaluate expressions with parentheses)—pp. 44-45</li> <li>3-2 Multiplication Patterns (parentheses)—pp. 46-47</li> </ul> <p><b>Chapter 4 Division</b></p> <ul style="list-style-type: none"> <li>4-10 Order of Operations (evaluate numerical expressions/ parentheses)—pp. 88-89</li> <li>4-11 Expressions (parentheses, brackets)—pp. 90-91</li> </ul>
<p><b>OCS.Math.5.1c</b> Evaluate expressions that include variables for the unknown quantity</p>	<p><b>Chapter 4 Division</b></p> <ul style="list-style-type: none"> <li>4-11 Expressions—pp. 90-91</li> </ul> <p><b>Chapter 7 Fractions: Subtraction</b></p> <ul style="list-style-type: none"> <li>7-9 Problem Solving: Write and Solve an Equation (letter representing unknown quantity)—pp. 160-161</li> </ul> <p><i>See also Grade 6</i></p> <p><b>Chapter 1 Addition and Subtraction Operations and Expressions</b></p> <ul style="list-style-type: none"> <li>1-4 Write Addition and Subtraction Expressions (variable)—pp. 10-11</li> </ul>

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**OPERATIONS AND ALGEBRAIC THINKING (OA)**

Grade 5 Content Standards	Sadlier Math, Grade 5
<p><b>OCS.Math.5.1d</b> Write, interpret and evaluate numerical and algebraic expressions and equations</p>	<p><b>Problem Solving Strategies</b></p> <ul style="list-style-type: none"> <li>Write and Solve an Equation—p. xxv</li> </ul> <p><b>Chapter 1 Place Value, Addition and Subtraction</b></p> <ul style="list-style-type: none"> <li>1-4 Problem Solving: Use the Four-Step Process (write an equation)—pp. 10-11</li> <li>1-7 Find Sums and Differences (simplify expressions)—pp. 16-17</li> </ul> <p><b>Chapter 4 Division</b></p> <ul style="list-style-type: none"> <li>4-10 Order of Operations (evaluate numerical expressions)—pp. 88-89</li> <li>4-11 Expressions—pp. 90-91</li> </ul> <p><b>Chapter 7 Fractions: Subtraction</b></p> <ul style="list-style-type: none"> <li>7-9 Problem Solving: Write and Solve an Equation—pp. 160-161</li> </ul>
<p><b>OCS.Math.5.1e</b> Write and interpret numerical/algebraic expressions and equations from word problems</p>	<p><b>Chapter 1 Place Value, Addition and Subtraction</b></p> <ul style="list-style-type: none"> <li>1-4 Problem Solving: Use the Four-Step Process (write an equation)—pp. 10-11</li> </ul> <p><b>Chapter 4 Division</b></p> <ul style="list-style-type: none"> <li>4-11 Expressions (write an expression to represent word problems)—pp. 90-91</li> </ul> <p><b>Chapter 7 Fractions: Subtraction</b></p> <ul style="list-style-type: none"> <li>7-9 Problem Solving: Write and Solve an Equation—pp. 160-161</li> </ul>
<p><b>OCS.Math.5.2 Analyze patterns and relationships.</b></p>	
<p>*<b>OCS.Math.5.2a</b> Generate a rule for growing patterns, identifying the relationship between corresponding terms (x,y)</p>	<p><b>Chapter 17 Graphs and Data</b></p> <ul style="list-style-type: none"> <li>17-5 Write Number Patterns (pattern rule)—pp. 390-391</li> </ul>
<p>*<b>OCS.Math.5.2b</b> Generate numerical patterns using one or two given rules (x,y)</p>	<p><b>Chapter 17 Graphs and Data</b></p> <ul style="list-style-type: none"> <li>17-5 Write Number Patterns—pp. 390-391</li> <li>17-6 Graph Number Patterns—pp. 392-393</li> </ul>
<p>*<b>OCS.Math.5.2c</b> Use tables, ordered pairs and graphs to represent the relationship between corresponding terms</p>	<p><b>Chapter 17 Graphs and Data</b></p> <ul style="list-style-type: none"> <li>17-5 Write Number Patterns (tables)—pp. 390-391</li> <li>17-6 Graph Number Patterns—pp. 392-393</li> <li>17-7 Problem Solving: Find and Use a Pattern—pp. 394-395</li> </ul>
<p>*<b>OCS.Math.5.2d</b> Define the application of ordered pairs to a coordinate plane</p>	<p><b>Chapter 17 Graphs and Data</b></p> <ul style="list-style-type: none"> <li>17-6 Graph Number Patterns—pp. 392-393</li> <li>17-7 Problem Solving: Find and Use a Pattern—pp. 394-395</li> </ul>

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## NUMBER AND OPERATIONS IN BASE TEN (NBT)

Grade 5 Content Standards	Sadlier Math, Grade 5
<b>OCS.Math.5.3 Understand the place value system.</b>	
<b>OCS.Math.5.3a</b> 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 1/10 of what it represents in the place to its left	<b>Chapter 1 Place Value, Addition and Subtraction</b> <ul style="list-style-type: none"> <li>1-1 Place Value to Billions—pp. 2-3</li> <li>1-2 Expanded Form—pp. 4-5</li> </ul>
* <b>OCS.Math.5.3b</b> Explain patterns in the number of zeros of the product when multiplying a number by powers of 10	<b>Chapter 1 Place Value, Addition and Subtraction</b> <ul style="list-style-type: none"> <li>1-3 Powers of 10—pp. 8-9</li> </ul>
<b>OCS.Math.5.3c</b> Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10	<b>Chapter 12 Decimals: Multiplication</b> <ul style="list-style-type: none"> <li>12-1 Multiply by Powers of 10—pp. 262-263</li> </ul> <b>Chapter 13 Decimals: Division</b> <ul style="list-style-type: none"> <li>13-1 Divide by Powers of 10—pp. 288-289</li> </ul>
<b>OCS.Math.5.3d</b> Use whole-number exponents to denote powers of 10	<b>Chapter 1 Place Value, Addition and Subtraction</b> <ul style="list-style-type: none"> <li>1-3 Powers of 10 (exponents)—pp. 8-9</li> </ul>
* <b>OCS.Math.5.3e</b> Read and write decimals to the ten-thousandths place using base-ten numerals, number names, and expanded form	<b>Chapter 2 Place Value and Decimals</b> <ul style="list-style-type: none"> <li>2-1 Thousandths—pp. 24-25</li> <li>2-2 Decimals and Expanded Form—pp. 26-27</li> </ul>
* <b>OCS.Math.5.3f</b> Compare and order decimals to the ten-thousandths place using $>$ , $<$ , or $=$ symbols	<b>Chapter 2 Place Value and Decimals</b> <ul style="list-style-type: none"> <li>2-3 Compare and Order Decimals—pp. 30-31</li> </ul>
* <b>OCS.Math.5.3g</b> Round decimals to the indicated place value position	<b>Chapter 2 Place Value and Decimals</b> <ul style="list-style-type: none"> <li>2-4 Round Decimals—pp. 32-33</li> <li>2-6 Estimate with Decimals (round decimals)—pp. 36-37</li> </ul> <b>Chapter 10 Decimals: Addition</b> <ul style="list-style-type: none"> <li>10-3 Estimate Decimal Sums (round decimals)—pp. 224-225</li> </ul> <b>Chapter 11 Decimals: Subtraction</b> <ul style="list-style-type: none"> <li>11-2 Estimate Decimal Differences (round decimals)—pp. 244-245</li> </ul>
<b>OCS.Math.5.4 Perform operations with multi-digit whole numbers and with decimals to hundredths.</b>	
* <b>OCS.Math.5.4a</b> Fluently multiply multi-digit whole numbers using the standard algorithm	<b>Chapter 3 Multiplication</b> <ul style="list-style-type: none"> <li>3-4 Zeros in the Multiplicand—pp. 50-51</li> <li>3-5 Multiply by Two-Digit Numbers—pp. 54-55</li> <li>3-6 Problem Solving: Guess and Test—pp. 56-57</li> <li>3-7 Multiply by Three-Digit Numbers—pp. 58-59</li> <li>3-8 Zeros in the Multiplier—pp. 60-61</li> </ul>

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NUMBER AND OPERATIONS IN BASE TEN (NBT)	
Grade 5 Content Standards	Sadlier Math, Grade 5
* <b>OCS.Math.5.4b</b> Fluently divide up to four-digit dividends by two-digit divisors using strategies based on place value, the properties of operations and/or the relationship between multiplication and division	<b>Chapter 4 Division</b> <ul style="list-style-type: none"> <li>• 4-1 Division Patterns—pp. 68-69</li> <li>• 4-2 Estimation: Compatible Numbers—pp. 70-71</li> <li>• 4-3 Divide by One-Digit Numbers—pp. 72-73</li> <li>• 4-4 Zeros in the Quotient—pp. 74-75</li> <li>• 4-5 Divisibility and Mental Math—pp. 76-77</li> <li>• 4-6 Use Arrays and Area Models to Divide—pp. 80-81</li> <li>• 4-7 Use Strategies to Divide—pp. 82-83</li> <li>• 4-8 Divide by Two-Digit Numbers—pp. 84-85</li> <li>• 4-9 Problem Solving: Work Backward—pp. 86-87</li> </ul>
* <b>OCS.Math.5.4c</b> Recognize the percent and decimal value of benchmark fractions	<i>See Grade 6</i> <b>Chapter 11 Percent</b> <ul style="list-style-type: none"> <li>• 11-2 Relate Percents to Fractions—pp. 256-257</li> <li>• 11-3 Relate Percents to Decimals—pp. 258-259</li> <li>• 11-4 Relate Decimals, Fractions, and Percents—pp. 260-261</li> </ul>
* <b>OCS.Math.5.4d</b> Illustrate and explain division by using equations, rectangular arrays, and/or area models	<b>Chapter 4 Division</b> <ul style="list-style-type: none"> <li>• 4-3 Divide by One-Digit Numbers—pp. 72-73</li> <li>• 4-4 Zeros in the Quotient—pp. 74-75</li> <li>• 4-6 Use Arrays and Area Models to Divide—pp. 80-81</li> <li>• 4-7 Use Strategies to Divide—pp. 82-</li> </ul>
* <b>OCS.Math.5.4e</b> Report and explain remainders as fractions and decimals	<b>Chapter 5 Number Theory and Fractions</b> <ul style="list-style-type: none"> <li>• 5-8 Interpret a Remainder (fractions)—pp. 114-115</li> </ul> <i>*No reporting or explaining remainders as decimals.</i>
<b>OCS.Math.5.4f</b> Interpret remainders in problem solving	<b>Chapter 5 Number Theory and Fractions</b> <ul style="list-style-type: none"> <li>• 5-8 Interpret a Remainder—pp. 114-115</li> </ul>
<b>OCS.Math.5.4g</b> Estimate quotients using compatible numbers	<b>Chapter 4 Division</b> <ul style="list-style-type: none"> <li>• 4-2 Estimation: Compatible Numbers—pp. 70-71</li> </ul>
<b>OCS.Math.5.4h</b> Apply divisibility rules for 2, 3, 4, 5, 6, 9, 10	<b>Chapter 4 Division</b> <ul style="list-style-type: none"> <li>• 4-5 Divisibility and Mental Math (divisibility rules)—pp. 76-77</li> </ul>
* <b>OCS.Math.5.4i</b> Recognize and interpret the greatest common factor (GCF) and least common multiple (LCM)	<b>Chapter 5 Number Theory and Fractions</b> <ul style="list-style-type: none"> <li>• 5-2 Common Factors—pp. 100-101</li> </ul>
* <b>OCS.Math.5.4j</b> Add and subtract decimals to the hundredths using concrete models or drawing, strategies based on place value, properties of operations, the relationship between addition and subtraction	<b>Chapter 10 Decimals: Addition</b> <ul style="list-style-type: none"> <li>• 10-1 Use Models to Add Decimals—pp. 220-221</li> <li>• 10-2 Use Properties to Add Decimals—pp. 222-223</li> <li>• 10-3 Estimate Decimal Sums—pp. 224-225</li> <li>• 10-4 Problem Solving: Draw a Picture—pp. 228-229</li> <li>• 10-5 Add Decimals: Hundredths—pp. 230-231</li> </ul> <p style="text-align: right;"><i>continued</i></p>

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## NUMBER AND OPERATIONS IN BASE TEN (NBT)

Grade 5 Content Standards	<i>Sadlier Math, Grade 5</i>
	<ul style="list-style-type: none"> <li>• 10-6 Add Decimals: Thousandths—pp. 232-233</li> <li>• 10-7 Addition with Money—pp. 234-235</li> </ul> <p><b>Chapter 11 Decimals: Subtraction</b></p> <ul style="list-style-type: none"> <li>• 11-1 Use Models to Subtract Decimals—pp. 242-243</li> <li>• 11-2 Estimate Decimal Differences—pp. 244-245</li> <li>• 11-3 Subtract Decimals: Hundredths—pp. 248-249</li> <li>• 11-4 Subtract Decimals: Thousandths—pp. 250-251</li> <li>• 11-5 Subtraction with Money—pp. 252-253</li> <li>• 11-6 Problem Solving: Use a Model—pp. 254-255</li> </ul>
<p><b>*OCS.Math.5.4k</b> Multiply decimals to the hundredths using concrete models or drawing, strategies based on place value, properties of operations, the relationship between addition and subtraction</p>	<p><b>Chapter 12 Decimals: Multiplication</b></p> <ul style="list-style-type: none"> <li>• 12-2 Use Properties to Multiply a Decimal by a Whole Number—pp. 264-265</li> <li>• 12-3 Estimate Decimal Products—pp. 266-267</li> <li>• 12-4 Multiply Decimals by Whole Numbers—pp. 268-269</li> <li>• 12-5 Multiplication with Money—pp. 270-271</li> <li>• 12-6 Model Multiplying Two Decimals—pp. 274-275</li> <li>• 12-7 Multiply Decimals by Decimals—pp. 276-277</li> <li>• 12-8 Zeros in the Product—pp. 278-279</li> <li>• 12-9 Problem Solving: More Than One Way—pp. 280-281</li> </ul>
<p><b>*OCS.Math.5.4l</b> Explain the reasoning for using concrete models, drawing, strategies based on place value, properties of operations, and/or the relationship between addition and subtraction for decimal computation</p>	<p><b>Chapter 1 Place Value, Addition and Subtraction</b></p> <ul style="list-style-type: none"> <li>• 1-5 Addition Properties and Subtraction Rules—pp. 12-13</li> <li>• 1-6 Estimate Sums and Differences—pp. 14-15</li> <li>• 1-7 Find Sums and Differences—pp. 16-17</li> </ul>

## NUMBER AND OPERATIONS—FRACTIONS (NF)

Grade 5 Content Standards	<i>Sadlier Math, Grade 5</i>
<p><b>OCS.Math.5.5 Use equivalent fractions as a strategy to add and subtract fractions.</b></p>	
<p><b>*OCS.Math.5.5a</b> Add and subtract fractions with unlike denominators including mixed numbers by replacing given fractions with equivalent fractions</p>	<p><b>Chapter 6 Fractions: Addition</b></p> <ul style="list-style-type: none"> <li>• 6-1 Model Addition with Unlike Denominators—pp. 122-123</li> <li>• 6-2 Add Fractions: Unlike Denominators—pp. 124-125</li> <li>• 6-3 Fraction Addition: Estimation and Reasonableness—pp. 126-127</li> <li>• 6-4 Add Mixed Numbers—pp. 130-131</li> <li>• 6-5 Problem Solving: Use a Model—pp. 132-133</li> <li>• 6-6 Rename Mixed Number Sums—pp. 134-135</li> </ul> <p><b>Chapter 7 Fractions: Subtraction</b></p> <ul style="list-style-type: none"> <li>• 7-1 Model Subtraction of Fractions with Unlike Denominators—pp. 142-143</li> <li>• 7-2 Subtract Fractions: Unlike Denominators—pp. 144-145</li> </ul> <p style="text-align: right;"><i>continued</i></p>

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**NUMBER AND OPERATIONS—FRACTIONS (NF)**

Grade 5 Content Standards	Sadlier Math, Grade 5
	<ul style="list-style-type: none"> <li>• 7-3 Subtract Fractions: Estimation and Reasonableness—pp. 146–147</li> <li>• 7-4 Model Subtraction with Mixed Numbers—pp. 150–151</li> <li>• 7-5 Estimate Sums and Differences of Mixed Numbers—pp. 152–153</li> <li>• 7-6 Subtract Fractions and Whole Numbers from Mixed Numbers—pp. 154–155</li> <li>• 7-7 Subtract Mixed Numbers: Rename Fractions—pp. 156–157</li> <li>• 7-8 Subtract Mixed Numbers: Rename Whole Numbers and Fractions—pp. 158–159</li> <li>• 7-9 Problem Solving: Write and Solve An Equation—pp. 160–161</li> </ul>
<p><b>OCS.Math.5.5b</b> Solve word problems involving addition and subtraction of fractions including cases of unlike denominators using visual models or equations to represent the problem</p>	<p><b>Chapter 6 Fractions: Addition</b></p> <ul style="list-style-type: none"> <li>• 6-1 Model Addition with Unlike Denominators—pp. 122–123</li> <li>• 6-2 Add Fractions: Unlike Denominators—pp. 124–125</li> <li>• 6-3 Fraction Addition: Estimation and Reasonableness—pp. 126–127</li> <li>• 6-4 Add Mixed Numbers—pp. 130–131</li> <li>• 6-5 Problem Solving: Use a Model—pp. 132–133</li> <li>• 6-6 Rename Mixed Number Sums—pp. 134–135</li> </ul> <p><b>Chapter 7 Fractions: Subtraction</b></p> <ul style="list-style-type: none"> <li>• 7-1 Model Subtraction of Fractions with Unlike Denominators—pp. 142–143</li> <li>• 7-2 Subtract Fractions: Unlike Denominators—pp. 144–145</li> <li>• 7-3 Subtract Fractions: Estimation and Reasonableness—pp. 146–147</li> <li>• 7-4 Model Subtraction with Mixed Numbers—pp. 150–151</li> <li>• 7-5 Estimate Sums and Differences of Mixed Numbers—pp. 152–153</li> <li>• 7-6 Subtract Fractions and Whole Numbers from Mixed Numbers—pp. 154–155</li> <li>• 7-7 Subtract Mixed Numbers: Rename Fractions—pp. 156–157</li> <li>• 7-8 Subtract Mixed Numbers: Rename Whole Numbers and Fractions—pp. 158–159</li> <li>• 7-9 Problem Solving: Write and Solve An Equation—pp. 160–161</li> </ul>
<p>*<b>OCS.Math.5.5c</b> Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers</p>	<p><b>Chapter 6 Fractions: Addition</b></p> <ul style="list-style-type: none"> <li>• 6-3 Fraction Addition: Estimation and Reasonableness (use benchmarks)—pp. 126–127</li> <li>• 6-5 Problem Solving: Use a Model (answer is reasonable)—pp. 132–133</li> </ul> <p><b>Chapter 7 Fractions: Subtraction</b></p> <ul style="list-style-type: none"> <li>• 7-4 Model Subtraction with Mixed Numbers—pp. 150–151</li> <li>• 7-5 Estimate Sums and Differences of Mixed Numbers (rounding/front-end estimation)—pp. 152–153</li> </ul>

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NUMBER AND OPERATIONS—FRACTIONS (NF)	
Grade 5 Content Standards	Sadlier Math, Grade 5
<p><b>OCS.Math.5.5d</b> Apply greatest common factor (GCF) to express sums and differences in simplest forms</p>	<p><b>Chapter 5 Number Theory and Fractions</b></p> <ul style="list-style-type: none"> <li>5-2 Common Factors (GCF)—pp. 100-101</li> <li>5-6 Fractions Greater Than or Equal to One (simplest form)—pp. 110-111</li> </ul> <p><b>Chapter 6 Fractions: Addition</b></p> <ul style="list-style-type: none"> <li>6-1 Model Addition with Unlike Denominators (simplest form)—pp. 122-123</li> <li>6-2 Add Fractions: Unlike Denominators—pp. 124-125</li> <li>6-4 Add Mixed Numbers—pp. 130-131</li> <li>6-5 Problem Solving: Use a Model—pp. 132-133</li> <li>6-6 Rename Mixed Number Sums—pp. 134-135</li> </ul> <p><b>Chapter 7 Fractions: Subtraction</b></p> <ul style="list-style-type: none"> <li>7-1 Model Subtraction of Fractions with Unlike Denominators—pp. 142-143</li> <li>7-2 Subtract Fractions: Unlike Denominators—pp. 144-145</li> <li>7-4 Model Subtraction with Mixed Numbers—pp. 150-151</li> <li>7-6 Subtract Fractions and Whole Numbers from Mixed Numbers—pp. 154-155</li> <li>7-7 Subtract Mixed Numbers: Rename Fractions—pp. 156-157</li> <li>7-8 Subtract Mixed Numbers: Rename Whole Numbers and Fractions—pp. 158-159</li> </ul>
<p><b>OCS.Math.5.6 Apply and extend previous understandings of multiplication and division.</b></p>	
<p><b>*OCS.Math.5.6a</b> Interpret a fraction as division of the numerator by the denominator</p>	<p><b>Chapter 5 Number Theory and Fractions</b></p> <ul style="list-style-type: none"> <li>5-8 Interpret a Remainder (interpret a fraction as a division)—pp. 114-115</li> </ul>
<p><b>*OCS.Math.5.6b</b> Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers</p>	<p><b>Chapter 5 Number Theory and Fractions</b></p> <ul style="list-style-type: none"> <li>5-8 Interpret a Remainder—pp. 114-115</li> </ul> <p><b>Chapter 9 Fractions: Division</b></p> <ul style="list-style-type: none"> <li>9-4 Divide Unit Fractions by Whole Numbers—pp. 206-207</li> <li>9-5 Divide Fractions by Whole Numbers—pp. 208-209</li> </ul>
<p><b>OCS.Math.5.6c</b> Apply and extend previous understanding of multiplication to multiply a fraction or whole number by a fraction</p>	<p><b>Chapter 8 Fractions: Multiplication</b></p> <ul style="list-style-type: none"> <li>8-1 Model Multiplying Fractions—pp. 168-169</li> <li>8-2 Multiply Fractions by Fractions—pp. 170-171</li> <li>8-3 Multiply Fractions and Whole Numbers—pp. 172-173</li> <li>8-5 Common Factors in Products—pp. 176-177</li> <li>8-8 Multiply Fractions and Mixed Numbers—pp. 184-185</li> <li>8-9 Multiply Mixed Numbers—pp. 186-187</li> </ul>
<p><b>OCS.Math.5.6d</b> Fluently multiply a fraction by a whole number</p>	<p><b>Chapter 8 Fractions: Multiplication</b></p> <ul style="list-style-type: none"> <li>8-3 Multiply Fractions and Whole Numbers—pp. 172-173</li> </ul>

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NUMBER AND OPERATIONS—FRACTIONS (NF)	
Grade 5 Content Standards	Sadlier Math, Grade 5
* <b>OCS.Math.5.6e</b> Express fractions greater than one as mixed numbers	<p><b>Chapter 5 Number Theory and Fractions</b></p> <ul style="list-style-type: none"> <li>• 5-6 Fractions Greater Than or Equal to One—pp. 110-111</li> <li>• 5-8 Interpret a Remainder—pp. 114-115</li> </ul> <p><b>Chapter 8 Fractions: Multiplication</b></p> <ul style="list-style-type: none"> <li>• 8-6 Rename Mixed Numbers as Fractions—pp. 180-181</li> <li>• 8-7 Estimate Products with Mixed Numbers—pp. 182-183</li> </ul>
<b>OCS.Math.5.6f</b> Interpret multiplication as scaling (resizing)	<p><b>Chapter 8 Fractions: Multiplication</b></p> <ul style="list-style-type: none"> <li>• 8-4 Scaling Fractions—pp. 174-175</li> </ul>
<b>OCS.Math.5.6g</b> Compare the size of a product to the size of one factor on the basis of the size of the other factor	<p><b>Chapter 8 Fractions: Multiplication</b></p> <ul style="list-style-type: none"> <li>• 8-4 Scaling Fractions—pp. 174-175</li> </ul>
<b>OCS.Math.5.6h</b> Use scaling or resizing to explain why multiplying a given number by an improper fraction results in a product greater than the given number	<p><b>Chapter 8 Fractions: Multiplication</b></p> <ul style="list-style-type: none"> <li>• 8-4 Scaling Fractions—pp. 174-175</li> </ul>
<b>OCS.Math.5.6i</b> Use scaling or resizing to explain why multiplying a given number by a proper fraction results in a product smaller than the given number	<p><b>Chapter 8 Fractions: Multiplication</b></p> <ul style="list-style-type: none"> <li>• 8-4 Scaling Fractions—pp. 174-175</li> </ul>
* <b>OCS.Math.5.6j</b> Solve real world problems involving fractions and mixed numbers using visual models and equations	<p><b>Chapter 8 Fractions: Multiplication</b></p> <ul style="list-style-type: none"> <li>• 8-2 Multiply Fractions by Fractions—pp. 170-171</li> <li>• 8-3 Multiply Fractions and Whole Numbers—pp. 172-173</li> </ul> <p><b>Chapter 9 Fractions: Division</b></p> <ul style="list-style-type: none"> <li>• 9-6 Word Problems Involving Fraction Division—pp. 210-211</li> </ul>
* <b>OCS.Math.5.6k</b> Compute quotients by dividing unit fractions by whole numbers	<p><b>Chapter 9 Fractions: Division</b></p> <ul style="list-style-type: none"> <li>• 9-4 Divide Unit Fractions by Whole Numbers—pp. 206-207</li> </ul>
* <b>OCS.Math.5.6l</b> Compute quotients by dividing whole numbers by unit fractions	<p><b>Chapter 9 Fractions: Division</b></p> <ul style="list-style-type: none"> <li>• 9-1 Divide Whole Numbers by Unit Fractions—pp. 198-199</li> </ul>
<b>OCS.Math.5.6m</b> Interpret division of a unit fraction by a whole number, and compute such quotients	<p><b>Chapter 9 Fractions: Division</b></p> <ul style="list-style-type: none"> <li>• 9-4 Divide Unit Fractions by Whole Numbers—pp. 206-207</li> </ul>
<b>OCS.Math.5.6n</b> Interpret division of a whole number by a unit fraction, and compute such quotients	<p><b>Chapter 9 Fractions: Division</b></p> <ul style="list-style-type: none"> <li>• 9-1 Divide Whole Numbers by Unit Fractions—pp. 198-199</li> <li>• 9-2 Reciprocals—pp. 200-201</li> <li>• 9-3 Divide Whole Numbers by Fractions—pp. 202-203</li> </ul>

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## NUMBER AND OPERATIONS—FRACTIONS (NF)

Grade 5 Content Standards	<i>Sadlier Math, Grade 5</i>
<p><b>OCS.Math.5.6o</b> Solve real world problems involving division of unit fractions by whole numbers</p>	<p><b>Chapter 9 Fractions: Division</b></p> <ul style="list-style-type: none"> <li>• 9-4 Divide Unit Fractions by Whole Numbers—pp. 206–207</li> <li>• 9-5 Divide Fractions by Whole Numbers—pp. 208–209</li> <li>• 9-6 Word Problems Involving Fraction Division—pp. 210–211</li> <li>• 9-7 Problem Solving: More Than One Way—pp. 212–213</li> </ul>
<p><b>OCS.Math.5.6p</b> Solve real world problems involving division of whole numbers by unit fractions</p>	<p><b>Chapter 9 Fractions: Division</b></p> <ul style="list-style-type: none"> <li>• 9-1 Divide Whole Numbers by Unit Fractions—pp. 198–199</li> <li>• 9-3 Divide Whole Numbers by Fractions—pp. 202–203</li> <li>• 9-6 Word Problems Involving Fraction Division—pp. 210–211</li> <li>• 9-7 Problem Solving: More Than One Way—pp. 212–213</li> </ul>

## MEASUREMENT AND DATA (MD)

Grade 5 Content Standards	<i>Sadlier Math, Grade 5</i>
<p><b>OCS.Math.5.7 Convert like measurement units within a given measurement system.</b></p>	
<p><b>*OCS.Math.5.7a</b> Convert among different size measurement units (mass, weight, liquid volume, length, time) within one system of units (metric system, customary, and time).</p>	<p><b>Chapter 13 Decimals: Division</b></p> <ul style="list-style-type: none"> <li>• 13-8 Problem Solving: Work Backward (hours/minutes)—pp. 304–305</li> </ul> <p><b>Chapter 14 Measurement</b></p> <ul style="list-style-type: none"> <li>• 14-1 Relate Customary Units of Length—pp. 316–317</li> <li>• 14-2 Relate Customary Units of Capacity—pp. 318–319</li> <li>• 14-3 Relate Customary Units of Weight—pp. 320–321</li> <li>• 14-4 Compute with Customary Units—pp. 322–323</li> <li>• 14-5 Relate Metric Units of Length—pp. 326–327</li> <li>• 14-6 Relate Metric Units of Capacity—pp. 328–329</li> <li>• 14-7 Relate Metric Units of Mass—pp. 330–331</li> <li>• 14-8 Compute with Metric Units—pp. 332–333</li> </ul>
<p><b>OCS.Math.5.7b</b> Solve multi-step real world problems by converting different size standard measurement units within a given measurement system.</p>	<p><b>Chapter 14 Measurement</b></p> <ul style="list-style-type: none"> <li>• 14-1 Relate Customary Units of Length—pp. 316–317</li> <li>• 14-2 Relate Customary Units of Capacity—pp. 318–319</li> <li>• 14-3 Relate Customary Units of Weight—pp. 320–321</li> <li>• 14-4 Compute with Customary Units—pp. 322–323</li> <li>• 14-5 Relate Metric Units of Length—pp. 326–327</li> <li>• 14-6 Relate Metric Units of Capacity—pp. 328–329</li> <li>• 14-7 Relate Metric Units of Mass—pp. 330–331</li> <li>• 14-8 Compute with Metric Units—pp. 332–333</li> </ul>

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MEASUREMENT AND DATA (MD)	
Grade 5 Content Standards	Sadlier Math, Grade 5
<b>OCS.Math.5.8 Understand and apply the statistics process.</b>	
<p><b>*OCS.Math.5.8a</b> Identify, gather and display fractional data in an appropriate graph for statistical questions focused on both categorical and numerical data.</p>	<p><b>Chapter 17 Graphs and Data</b></p> <ul style="list-style-type: none"> <li>• 17-1 Line Plots with Whole Numbers and Decimals—pp. 380–381</li> <li>• 17-2 Line Plots with Fractions and Mixed Numbers—pp. 382–383</li> </ul> <p><i>See also Grade 4</i></p> <p><b>Chapter 15 Measurement and Data</b></p> <ul style="list-style-type: none"> <li>• 15-7 Surveys and Line Plots—pp. 338–339</li> </ul>
<p><b>OCS.Math.5.8b</b> Interpret data displayed on a variety of graphs (bar graph, pictograph, line plot, stem and leaf plots)</p>	<p><b>Chapter 17 Graphs and Data</b></p> <ul style="list-style-type: none"> <li>• 17-1 Line Plots with Whole Numbers and Decimals—pp. 380–381</li> <li>• 17-2 Line Plots with Fractions and Mixed Numbers—pp. 382–383</li> </ul> <p><i>See also Grade 3</i></p> <p><b>Chapter 12 Data</b></p> <ul style="list-style-type: none"> <li>• 12-1 Read Picture Graphs—pp. 252–253</li> <li>• 12-2 Make Picture Graphs—pp. 254–255</li> <li>• 12-3 Read Bar Graphs—pp. 256–257</li> <li>• 12-4 Make Bar Graphs—pp. 258–259</li> <li>• 12-5 Data and Two-Step Problems—pp. 260–261</li> <li>• 12-6 Problem Solving: Compare Models—pp. 264–265</li> <li>• 12-7 Read Line Plots—pp. 266–267</li> <li>• 12-8 Make Line Plots—pp. 268–269</li> </ul> <p><i>See also Grade 4</i></p> <p><b>Chapter 15 Measurement and Data</b></p> <ul style="list-style-type: none"> <li>• 15-5 Line Graphs—pp. 334–335</li> <li>• 15-6 Line Plots—pp. 336–337</li> <li>• 15-7 Surveys and Line Plots—pp. 338–339</li> <li>• 15-8 Choose an Appropriate Display—pp. 340–341</li> </ul> <p><i>See also Grade 6</i></p> <p><b>Chapter 12 Money and Time</b></p> <ul style="list-style-type: none"> <li>• 17-1 Dot Plots—pp. 378–379</li> <li>• 17-2 Box Plots—pp. 380–381</li> <li>• 17-3 Histograms—pp. 382–383</li> <li>• 17-4 Data Distributions—pp. 386–387</li> <li>• 17-5 Interpret Circle Graphs—pp. 388–389</li> </ul>
<p><b>OCS.Math.5.8c</b> Make observations from a graph related to a question posed</p>	<p><b>Chapter 17 Graphs and Data</b></p> <ul style="list-style-type: none"> <li>• 17-1 Line Plots with Whole Numbers and Decimals—pp. 380–381</li> <li>• 17-2 Line Plots with Fractions and Mixed Numbers—pp. 382–383</li> </ul>

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MEASUREMENT AND DATA (MD)	
Grade 5 Content Standards	Sadlier Math, Grade 5
<b>OCS.Math.5.8d</b> Calculate and apply range, median, mode, and mean with whole numbers	<p>See Grade 6</p> <p><b>Chapter 16 Measures of Center and Variation</b></p> <ul style="list-style-type: none"> <li>16-2 Measures of Center (mean, median, mode)—pp. 360–361</li> <li>16-3 Measures of Variation: Range and Interquartile Range—pp. 362–363</li> </ul> <p><b>Chapter 17 Data Displays</b></p> <ul style="list-style-type: none"> <li>17-1 Dot Plots (range)—pp. 378–379</li> <li>17-2 Box Plots (range)—pp. 380–381</li> <li>17-4 Data Distributions (mean, median, mode)—pp. 386–387</li> </ul>
<b>OCS.Math.5.8e</b> Determine and represent all the possible outcomes in a simple probability experiment	<p>See Grade 6</p> <p><b>Chapter 18 Probability</b></p> <ul style="list-style-type: none"> <li>18-3 Probability and Likelihood—online</li> <li>18-4 Theoretical Probability—online</li> <li>18-6 Uniform Probability Models—online</li> <li>18-8 Problem Solving: Make an Organized List—online</li> </ul>
<b>OCS.Math.5.8f</b> Represent, using a common fraction, the probability that an event will occur in simple games and experiments	<p>See Grade 6</p> <p><b>Chapter 18 Probability</b></p> <ul style="list-style-type: none"> <li>18-3 Probability and Likelihood—online</li> <li>18-4 Theoretical Probability—online</li> <li>18-6 Uniform Probability Models—online</li> <li>18-8 Problem Solving: Make an Organized List—online</li> </ul>
<b>OCS.Math.5.8g</b> Pose and solve simple probability problems	<p>See also Grade 6</p> <p><b>Chapter 18 Probability</b></p> <ul style="list-style-type: none"> <li>18-3 Probability and Likelihood—online</li> <li>18-4 Theoretical Probability—online</li> <li>18-5 Relative Frequency and Experimental Probability—online</li> <li>18-8 Problem Solving: Make an Organized List—online</li> </ul>
<b>OCS.Math.5.9 Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.</b>	
<b>*OCS.Math.5.9a</b> Recognize volume as an attribute of solid figures and understand concepts of volume measurement	<p><b>Chapter 16 Volume</b></p> <ul style="list-style-type: none"> <li>16-2 Cubic Measure—pp. 362–363</li> <li>16-3 Volumes of Rectangular Prisms—pp. 364–365</li> </ul>
<b>*OCS.Math.5.9b</b> Define a cubic unit as a cube with all side lengths of 1 unit and a volume of 1 unit cubed (cubic cm, cubic in, cubic feet)	<p><b>Chapter 16 Volume</b></p> <ul style="list-style-type: none"> <li>16-1 Solid Figures—pp. 360–361</li> <li>16-2 Cubic Measure—pp. 362–363</li> <li>16-3 Volumes of Rectangular Prisms—pp. 364–365</li> </ul>

MEASUREMENT AND DATA (MD)	
Grade 5 Content Standards	Sadlier Math, Grade 5
<b>OCS.Math.5.9c</b> Measure and express the volume of a solid figure by packing it without gaps with unit cubes (cubic cm, cubic in, cubic ft, and improvised units)	<b>Chapter 16 Volume</b> <ul style="list-style-type: none"> <li>16-2 Cubic Measure—pp. 362–363</li> <li>16-3 Volumes of Rectangular Prisms—pp. 364–365</li> </ul>
<b>OCS.Math.5.9d</b> Relate volume to the operations of multiplication and repeated addition and solve real world and mathematical problems involving volume.	<b>Chapter 16 Volume</b> <ul style="list-style-type: none"> <li>16-3 Volumes of Rectangular Prisms—pp. 364–365</li> <li>16-6 Problem Solving: Act It Out—pp. 372–373</li> </ul>
<b>OCS.Math.5.9e</b> Find the volume of a right rectangular prism with whole number side lengths by packing it with unit cubes, and relate the volume to that which would be calculated by multiplying the edge lengths	<b>Chapter 16 Volume</b> <ul style="list-style-type: none"> <li>16-3 Volumes of Rectangular Prisms—pp. 364–365</li> <li>16-6 Problem Solving: Act It Out—pp. 372–373</li> </ul>
<b>*OCS.Math.5.9f</b> Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.	<b>Chapter 16 Volume</b> <ul style="list-style-type: none"> <li>16-4 Volume Formulas—pp. 368–369</li> </ul>
<b>OCS.Math.5.9g</b> Solve real world problems to find the volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-over-lapping parts	<b>Chapter 16 Volume</b> <ul style="list-style-type: none"> <li>16-5 Volume of Composite Figures—pp. 370–371</li> </ul>
GEOMETRY (G)	
Grade 5 Content Standards	Sadlier Math, Grade 5
<b>OCS.Math.5.10 Graph points on the coordinate plane to solve real-world and mathematical problems.</b>	
<b>*OCS.Math.5.10a</b> Identify the parts of a coordinate plane including origin, x axis and y axis	<b>Chapter 17 Graphs and Data</b> <ul style="list-style-type: none"> <li>17-3 The Coordinate Plane—pp. 386–387</li> </ul>
<b>*OCS.Math.5.10b</b> Locate and describe how to find a point in quadrant one of the coordinate plane using an ordered pair of numbers	<b>Chapter 17 Graphs and Data</b> <ul style="list-style-type: none"> <li>17-3 The Coordinate Plane—pp. 386–387</li> </ul>
<b>OCS.Math.5.10c</b> 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	<b>Chapter 17 Graphs and Data</b> <ul style="list-style-type: none"> <li>17-4 Using Coordinate Graphs—pp. 388–389</li> </ul>

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GEOMETRY (G)	
Grade 5 Content Standards	Sadlier Math, Grade 5
<b>OCS.Math.5.11 Classify two and three dimensional figures into categories based on their properties.</b>	
<b>OCS.Math.5.11a</b> Identify the following attributes: sides, vertices, faces, edges, and angles (obtuse, acute, right, or straight)	<p><b>Chapter 15 Geometry</b></p> <ul style="list-style-type: none"> <li>• 15-1 Polygons (sides, vertices)—pp. 342-343</li> <li>• 15-2 Triangles (angles: obtuse, acute, right)—pp. 344-345</li> <li>• 15-3 Quadrilaterals (sides, vertex)—pp. 348-349</li> <li>• 15-4 Classify Quadrilaterals (angles, sides)—pp. 350-351</li> </ul> <p><b>Chapter 16 Volume</b></p> <ul style="list-style-type: none"> <li>• 16-1 Solid Figures (face, edge, vertex)—pp. 360-361</li> </ul> <p>See also <i>Grade 4 (straight angle)</i></p> <p><b>Chapter 16 Lines and Angles</b></p> <ul style="list-style-type: none"> <li>• 16-2 Angle Measure (right, acute, obtuse, straight)—pp. 352-353</li> </ul>
<b>OCS.Math.5.11b</b> Compare and understand that attributes belonging to a category of two-dimensional figures also belong to all	<p><b>Chapter 15 Geometry</b></p> <ul style="list-style-type: none"> <li>• 15-1 Polygons—pp. 342-343</li> <li>• 15-2 Triangles—pp. 344-345</li> <li>• 15-3 Quadrilaterals—pp. 348-349</li> <li>• 15-4 Classify Quadrilaterals—pp. 350-351</li> <li>• 15-5 Problem Solving: Use a Model—pp. 352-353</li> </ul>
<b>*OCS.Math.5.11c</b> Classify two-dimensional figures into hierarchy based on their properties	<p><b>Chapter 15 Geometry</b></p> <ul style="list-style-type: none"> <li>• 15-2 Triangles—pp. 344-345</li> <li>• 15-4 Classify Quadrilaterals—pp. 350-351</li> <li>• 15-5 Problem Solving: Use a Model—pp. 352-353</li> </ul>
<b>*OCS.Math.5.11d</b> Classify three-dimensional figures including cubes, prisms, pyramids, cones, and spheres	<p><b>Chapter 16 Volume</b></p> <ul style="list-style-type: none"> <li>• 16-1 Solid Figures—pp. 360-361</li> </ul>

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