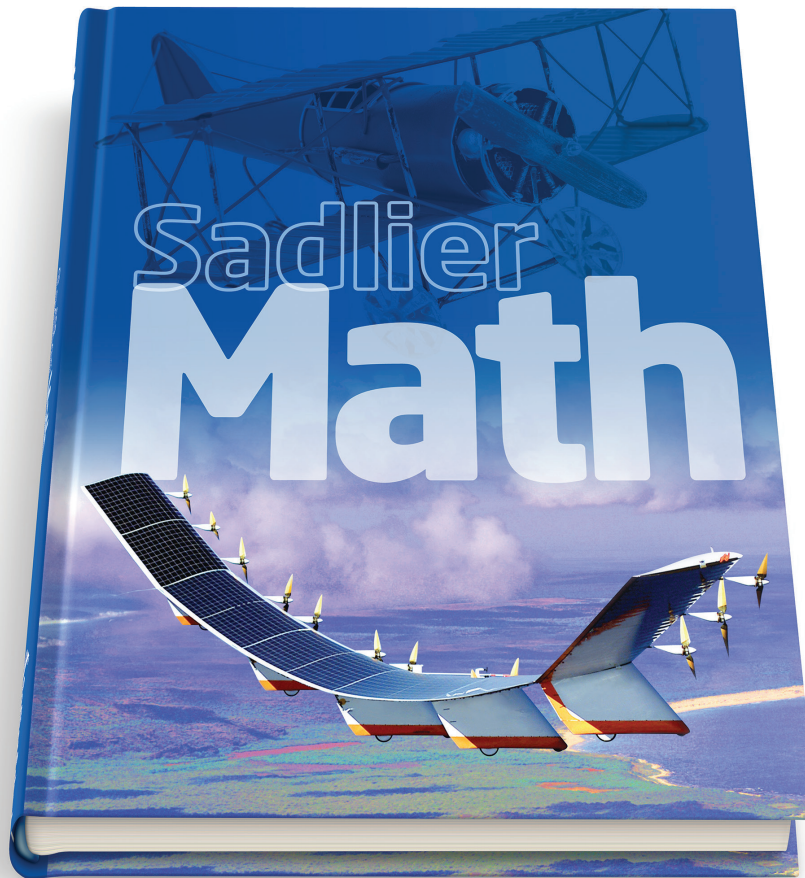


Sadlier Math[™]

Correlation to the Mathematics Florida Standards (MAFS)

Grade 5



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Domain: OPERATIONS AND ALGEBRAIC THINKING		5.OA
Grade 5 Content Standards	Sadlier Math, Grade 5	
Cluster 1: Write and interpret numerical expressions. (Additional Cluster)		
<p>MAFS.5.OA.1.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</p> <p><i>Cognitive Complexity:</i> Level 1: Recall</p>	<p>Chapter 2: 2-2 Chapter 3: 3-1 Chapter 4: 4-10 & 4-11 Chapter 7: 7-2 Chapter 12: 12-7 & 12-8</p>	
<p>MAFS.5.OA.1.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. <i>For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.</i></p> <p><i>Cognitive Complexity:</i> Level 1: Recall</p>	<p>Chapter 1: 1-5 through 1-7 Chapter 3: 3-2 & 3-3 Chapter 4: 4-10 & 4-11</p>	
Cluster 2: Analyze patterns and relationships. (Additional Cluster)		
<p>MAFS.5.OA.2.3 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. <i>For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</i></p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>	<p>Chapter 17: 17-5 through 17-7</p>	

Domain: NUMBER AND OPERATIONS IN BASE TEN		5.NBT
Grade 5 Content Standards	Sadlier Math, Grade 5	
Cluster 1: Understand the place value system. (Major Cluster)		
<p>MAFS.5.NBT.1.1 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 1/10 of what it represents in the place to its left.</p> <p><i>Cognitive Complexity:</i> Level 1: Recall</p>	Chapter 1: 1-1, 1-2, & 1-4	
<p>MAFS.5.NBT.1.2 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. Use whole-number exponents to denote powers of 10.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>	Chapter 1: 1-3 & 1-4 Chapter 12: 12-1 Chapter 13: 13-1	
<p>MAFS.5.NBT.1.3 Read, write, and compare decimals to thousandths.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>		
<p>a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.</p>	Chapter 2: 2-1	
<p>b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p>	Chapter 2: 2-3 Chapter 13: 13-3 through 13-5	
<p>MAFS.5.NBT.1.4 Use place value understanding to round decimals to any place.</p> <p><i>Cognitive Complexity:</i> Level 1: Recall</p>	Chapter 2: 2-4, 2-5 & 2-6 Chapter 10: 10-3 Chapter 11: 11-2	

Domain: NUMBER AND OPERATIONS IN BASE TEN **5.NBT**

Grade 5 Content Standards	Sadlier Math, Grade 5
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Cluster 2: Perform operations with multi-digit whole numbers and with decimals to hundredths. (Major Cluster)

<p>MAFS.5.NBT.2.5 Fluently multiply multi-digit whole numbers using the standard algorithm.</p> <p><i>Cognitive Complexity:</i> Level 1: Recall</p>	<p>Chapter 3: 3-4 through 3-8</p>
<p>MAFS.5.NBT.2.6 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.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>	<p>Chapter 4: 4-1 through 4-9</p>
<p>MAFS.5.NBT.2.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>	<p>Chapter 10: 10-1 through 10-7 Chapter 11: 11-1 through 11-6 Chapter 12: 12-2 through 12-9 Chapter 13: 13-1, 13-2, 13-5 through 13-10</p>

Domain: NUMBER AND OPERATIONS — FRACTIONS **5.NF**

Grade 5 Content Standards	Sadlier Math, Grade 5
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Cluster 1: Use equivalent fractions as a strategy to add and subtract fractions. (Major Cluster)

<p>MAFS.5.NF.1.1 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</p> <p style="text-align: center;"><i>continued</i></p>	<p>Chapter 6: 6-1 through 6-6 Chapter 7: 7-1, 7-2, 7-4, 7-6 through 7-8</p>
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Domain: NUMBER AND OPERATIONS — FRACTIONS		5.NF
Grade 5 Content Standards	Sadlier Math, Grade 5	
<p>equivalent sum or difference of fractions with like denominators. <i>For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$. (In general, $a/b + c/d = (ad + bc)/bd$.)</i></p> <p><i>Cognitive Complexity: Level 2: Basic Application of Skills & Concepts</i></p>		
<p>MAFS.5.NF.1.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. <i>For example, recognize an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.</i></p> <p><i>Cognitive Complexity: Level 2: Basic Application of Skills & Concepts</i></p>	<p>Chapter 6: 6-1 through 6-6 Chapter 7: 7-1 through 7-3, 7-5, 7-7 through 7-9 Chapter 8: 8-11 Chapter 9: 9-6</p>	
<p>Cluster 2: Apply and extend previous understandings of multiplication and division to multiply and divide fractions. (Major Cluster)</p>		
<p>MAFS.5.NF.2.3 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, e.g., by using visual fraction models or equations to represent the problem. <i>For example, interpret $3/4$ as the result of dividing 3 by 4, noting that $3/4$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $3/4$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?</i></p> <p><i>Cognitive Complexity: Level 2: Basic Application of Skills & Concepts</i></p>	<p>Chapter 5: 5-8 Chapter 8: 8-6 & 8-7</p>	

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Domain: NUMBER AND OPERATIONS — FRACTIONS		5.NF
Grade 5 Content Standards	Sadlier Math, Grade 5	
<p>MAFS.5.NF.2.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>		
<p>a. 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 $a \times q \div b$. For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)</p>	Chapter 8: 8-1 through 8-3, 8-5, 8-8, & 8-9	
<p>b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares 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.</p>	Chapter 8: 8-10	
<p>MAFS.5.NF.2.5 Interpret multiplication as scaling (resizing), by:</p> <p><i>Cognitive Complexity:</i> Level 3: Strategic Thinking & Complex Reasoning</p>		
<p>a. 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.</p>	Chapter 8: 8-4	
<p>b. Explaining 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); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and</p> <p style="text-align: center;"><i>continued</i></p>	Chapter 8: 8-4	

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Domain: NUMBER AND OPERATIONS — FRACTIONS		5.NF
Grade 5 Content Standards	Sadlier Math, Grade 5	
relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.		
<p>MAFS.5.NF.2.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>	<p>Chapter 8: 8-2, 8-3 & 8-11 Chapter 9: 9-6</p>	
<p>MAFS.5.NF.2.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>		
<p>a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. <i>For example, create a story context for $(1/3) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4 = 1/12$ because $(1/12) \times 4 = 1/3$.</i></p>	<p>Chapter 9: 9-4 & 9-5</p>	
<p>b. Interpret division of a whole number by a unit fraction, and compute such quotients. <i>For example, create a story context for $4 \div (1/5)$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (1/5) = 20$ because $20 \times (1/5) = 4$.</i></p>	<p>Chapter 9: 9-1 through 9-3</p>	
<p>c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. <i>For example, how much chocolate</i> <i>continued</i></p>	<p>Chapter 9: 9-6 & 9-7</p>	

Domain: NUMBER AND OPERATIONS — FRACTIONS **5.NF**

Grade 5 Content Standards	Sadlier Math, Grade 5
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<i>will each person get if 3 people share 1/2 lb of chocolate equally?</i>	
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Domain: MEASUREMENT AND DATA **5.MD**

Grade 5 Content Standards	Sadlier Math, Grade 5
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Cluster 1: Convert like measurement units within a given measurement system. (Supporting Cluster)

MAFS.5.MD.1.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. <i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts	Chapter 14: 14-1 through 14-9
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Cluster 2: Represent and interpret data. (Supporting Cluster)

MAFS.5.MD.2.2 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. <i>For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.</i> <i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts	Chapter 17: 17-1 & 17-2
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Domain: MEASUREMENT AND DATA		5.MD
Grade 5 Content Standards	Sadlier Math, Grade 5	
<p>Cluster 3: Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition. (Major Cluster)</p>		
<p>MAFS.5.MD.3.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.</p> <p><i>Cognitive Complexity:</i> Level 1: Recall</p>		
<p>a. 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.</p>	<p>Chapter 16: 16-1 through 16-3</p>	
<p>b. 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.</p>	<p>Chapter 16: 16-2 & 16-3</p>	
<p>MAFS.5.MD.3.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.</p> <p><i>Cognitive Complexity:</i> Level 1: Recall</p>		
<p>MAFS.5.MD.3.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>		
<p>a. 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. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.</p>	<p>Chapter 16: 16-3 & 16-6</p>	
<p>b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of rectangular prisms with whole-number</p> <p style="text-align: center;"><i>continued</i></p>	<p>Chapter 16: 16-4</p>	

Domain: MEASUREMENT AND DATA **5.MD**

Grade 5 Content Standards	<i>Sadlier Math, Grade 5</i>
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edge lengths in the context of solving real world and mathematical problems.	
c. 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.	Chapter 16: 16-5

Domain: GEOMETRY **5.G**

Grade 5 Content Standards	<i>Sadlier Math, Grade 5</i>
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Cluster 1: Graph points on the coordinate plane to solve real-world and mathematical problems. (Additional Cluster)	
<p>MAFS.5.G.1.1 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 (e.g., x-axis and x-coordinate, y-axis and y-coordinate).</p> <p><i>Cognitive Complexity:</i> Level 1: Recall</p>	Chapter 17: 17-3
<p>MAFS.5.G.1.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and</p> <p style="text-align: center;"><i>continued</i></p>	Chapter 17: 17-4

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Domain: GEOMETRY		5.G
Grade 5 Content Standards	Sadlier Math, Grade 5	
<p>interpret coordinate values of points in the context of the situation.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>		
Cluster 2: Classify two-dimensional figures into categories based on their properties. (Additional Cluster)		
<p>MAFS.5.G.2.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. <i>For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.</i></p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>	<p>Chapter 15: 15-1 through 15-5</p>	
<p>MAFS.5.G.2.4 Classify two-dimensional figures in a hierarchy based on properties.</p> <p><i>Cognitive Complexity:</i> Level 2: Basic Application of Skills & Concepts</p>	<p>Chapter 15: 15-2, 15-4, & 15-5</p>	