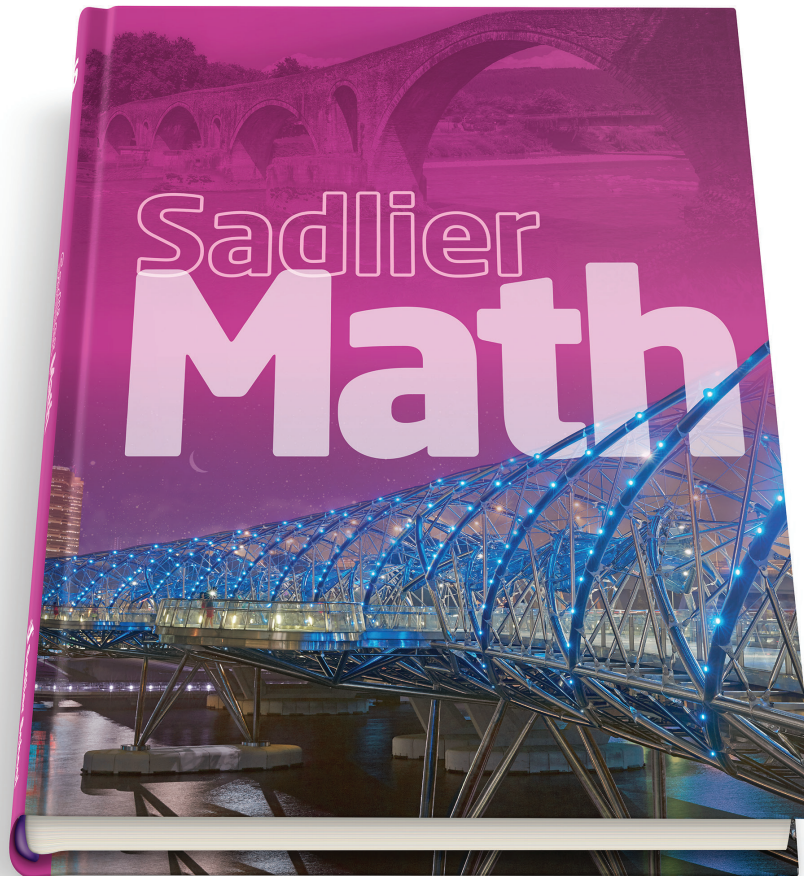


# **Sadlier Math™**

Correlation to the Archdiocese of Cincinnati  
Graded Course of Study for Mathematics 2012

**Grade 6**



Learn more at [www.SadlierSchool.com/SadlierMath](http://www.SadlierSchool.com/SadlierMath)

STANDARD 1 – THE NUMBER SYSTEM	
Grade 5 Content Standards	Sadlier Math, Grade 5
<b>M.6.1.1</b> Compute fluently with multi-digit numbers and find common factors and multiples.	<b>Chapter 1: 1-1 through 1-3</b> <b>Chapter 2: 2-1 through 2-3</b> <b>Chapter 3: 3-1 through 3-7</b> <b>Chapter 6: 6-1 through 6-4</b>
<b>M.6.1.2</b> Divide multi-digit numbers using the standard algorithm.	<b>Chapter 3: 3-1</b>
<b>M.6.1.3</b> Fluently add, subtract, multiply and divide multi-digit decimals using the standard algorithm for each operation.	<b>Chapter 1: 1-1 through 1-3</b> <b>Chapter 2: 2-1 through 2-3</b> <b>Chapter 3: 3-2 through 3-7</b>
<b>M.6.1.4</b> Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12.	<b>Chapter 6: 6-1 through 6-4</b>
<b>M.6.1.5</b> 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. For example, express $36 + 8$ as $4(9 + 2)$ .	<b>Chapter 6: 6-3</b>
<b>M.6.1.6</b> Interpret and compute quotients of fractions and solve word problems involving division of fractions by fractions.	<b>Chapter 8: 8-3 through 8-11</b>
<b>M.6.1.7</b> Understand a rational number as a point on a number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on a line and in the plane with negative number coordinates.	<b>Chapter 9: 9-1</b>
<b>M.6.1.8</b> Find and position integers and other rational numbers on a horizontal or vertical number line diagram. Find and position pairs of integers and other rational numbers on a coordinate plane.	<b>Chapter 9: 9-1 through 9-3, 9-5 through 9-11</b>

## STANDARD 1 – THE NUMBER SYSTEM

Grade 5 Content Standards	Sadlier Math, Grade 5
<b>M.6.1.9</b> Understand that positive and negative numbers are used together to describe quantities having opposite directions or values.	<b>Chapter 9: 9-2</b>
<b>M.6.1.10</b> Understand ordering and absolute value of rational numbers.	<b>Chapter 9: 9-3, 9-4 &amp; 9-6</b>
<b>M.6.1.11</b> Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	<b>Chapter 9: 9-7 through 9-11</b>

## STANDARD 2 – RATIOS AND PROPORTIONAL RELATIONSHIPS

Grade 5 Content Standards	Sadlier Math, Grade 5
<b>M.6.2.1</b> Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	<b>Chapter 10: 10-1</b>
<b>M.6.2.2</b> Understand the concept of a unit rate $a/b$ associated with a ratio $a:b$ with $b \neq 0$ and use rate language in the context of a ratio relationship.	<b>Chapter 10: 10-6 through 10-9</b>
<b>M.6.2.3</b> Use ratio and rate reasoning to solve real-world and mathematical problems.	<b>Chapter 10: 10-1 through 10-9</b> <b>Chapter 11: 11-1 through 11-10</b> <b>Chapter 12: 12-1 through 12-4</b>
<b>M.6.2.4</b> Use ratio reasoning to convert measurement units: manipulate and transform units appropriately when multiplying or dividing quantities.	<b>Chapter 12: 12-1 through 12-4</b>
<b>M.6.2.5</b> Find a percent of a quantity as a rate per 100 (e.g. 30% of a quantity means 30/100 time the quantity). Solve problems involving finding the whole given a part and the percent.	<b>Chapter 11: 11-1 through 11-10</b>

## STANDARD 3 – EXPRESSION AND EQUATIONS

Grade 5 Content Standards	Sadlier Math, Grade 5
<p><b>M.6.3.1</b> Understand solving an equation or inequality as a process of answering a question (i.e., which values from a specific set, if any, make the equation or inequality true?).</p>	<p><b>Chapter 5: 5-1 &amp; 5-6</b></p>
<p><b>M.6.3.2</b> Solve real-world and mathematical problems by writing and solving equations of the form <math>x + p = 8</math> and <math>px = q</math> for cases in which <math>p</math>, <math>q</math> and <math>x</math> are all non-negative rational numbers.</p>	<p><b>Chapter 5: 5-2 &amp; 5-3</b> <b>Chapter 7: 7-6</b> <b>Chapter 8: 8-11</b></p>
<p><b>M.6.3.3</b> Write an inequality of the form <math>x &gt; c</math> or <math>x &lt; c</math> to represent a constraint in a real-world or mathematical problem. Recognize that inequalities of the form <math>x &gt; c</math> or <math>x &lt; c</math> have infinitely many solutions; represent solutions of such inequalities or number line diagrams.</p>	<p><b>Chapter 5: 5-5 through 5-8</b></p>
<p><b>M.6.3.4</b> Use variables to represent two quantities in a real-world problem that change in a relationship to one another. Write an equation to express one quantity thought of as the dependent variable in terms of the other quantity thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables and relate these to the equation.</p>	<p><b>Chapter 13: 13-1 through 13-4</b></p>
<p><b>M.6.3.5</b> Write, read, and evaluate expressions in which letters stand for numbers and expressions involving whole-number exponents.</p>	<p><b>Chapter 4: 4-1 &amp; 4-2</b></p>
<p><b>M.6.3.6</b> Apply the properties of operations to generate equivalent expressions and identify when two expressions are equivalent.</p>	<p><b>Chapter 4: 4-7</b></p>

<b>STANDARD 4 – GEOMETRY</b>	
<b>Grade 5 Content Standards</b>	<b>Sadlier Math, Grade 5</b>
<p><b>M.6.4.1</b> Find the area of right triangles, other triangles, special quadrilaterals and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.</p>	<p><b>Chapter 14: 14-1 through 14-3, 14-5 &amp; 14-6</b></p>
<p><b>M.6.4.2</b> Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas <math>V = lwh</math> and <math>V = bh</math> to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.</p>	<p><b>Chapter 15: 15-4 through 15-6</b></p>
<p><b>M.6.4.3</b> Draw polygons in the coordinate plane, given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.</p>	<p><b>Chapter 9: 9-10 &amp; 9-11</b></p>
<p><b>M.6.4.4</b> Represent three-dimensional figures using nets made up of rectangles and triangles and use the nets to find surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.</p>	<p><b>Chapter 15: 15-1 through 15-3</b></p>

## STANDARD 5 – STATISTICS AND PROBABILITY

Grade 5 Content Standards	Sadlier Math, Grade 5
<p><b>M.6.5.1</b> Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answer. For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.</p>	<p><b>Chapter 16: 16-1</b></p>
<p><b>M.6.5.2</b> Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread and overall shape.</p>	<p><b>Chapter 16: 16-2 through 16-5</b> <b>Chapter 17: 17-2 &amp; 17-4</b></p>
<p><b>M.6.5.3</b> Recognize that a measure of center for a numerical data set summarizes all of its values with a single number while a measure of variation describes how its values vary with a single number.</p>	<p><b>Chapter 16: 16-2 through 16-4</b></p>
<p><b>M.6.5.4</b> Display numerical data in plots on a number line, including dot plots, histograms and box plots.</p>	<p><b>Chapter 17: 17-1 through 17-3</b></p>
<p><b>M.6.5.5</b> Summarize numerical data sets in relation to their content, such as by:</p>	
<ul style="list-style-type: none"> <li>Reporting the number of observations.</li> </ul>	<p><b>Chapter 16: 16-2 through 16-5</b> <b>Chapter 17: 17-1 through 17-4</b></p>
<ul style="list-style-type: none"> <li>Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</li> </ul>	<p><b>Chapter 16: 16-2 through 16-5</b> <b>Chapter 17: 17-1 through 17-4</b></p>
<ul style="list-style-type: none"> <li>Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.</li> </ul>	<p><b>Chapter 16: 16-2 through 16-5</b> <b>Chapter 17: 17-1 through 17-4</b></p>

## STANDARD 5 – STATISTICS AND PROBABILITY

### Grade 5 Content Standards

### Sadlier Math, Grade 5

- Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

**Chapter 16: 16-2 through 16-5**  
**Chapter 17: 17-1 through 17-4**