SADLIER

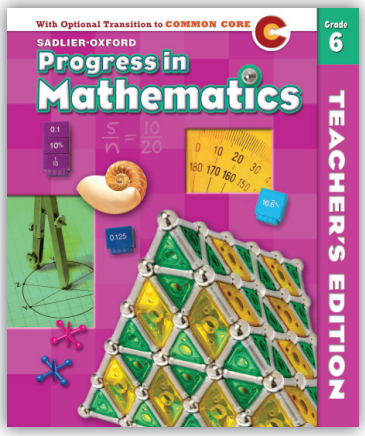
Progress in Mathematics

Correlated to the

Common Core State Standards

for Mathematics

GRADE 6



Sadlier
William H. Sadlier, Inc.
www.sadlier-oxford.com
800-221-5175

Ratios and Proportional Relationships 6.RP

Understand ratio concepts and use ratio reasoning to solve problems.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*	**Instruction** 11-1 Ratio—pp. 376–377 **Teacher's Edition** Differentiated Instruction: Inclusion: Ratio—TE p. 375J
2. Understand the concept of a unit rate a/b associated with a ratio a:b with b ? 0, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."*[1] [1]Expectations for unit rates in this grade are limited to non-complex fractions.	**Instruction** *11-2B Ratios and Unit Rates—Online 11-3 Rates (unit rate, unit price)—pp. 380–381
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.	
a. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	**Instruction** *11-2A Ratio and Rate Tables—Online *11-3A Compare Ratios—Online *14-7A Model Rates—Online
b. Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*	**Instruction** 11-3 Rates (unit rate, unit price)—pp. 380–381 11-4 Proportions—pp. 382–383 *11-4A Model Proportions with Double Number Lines—Online *11-4B Model Proportions with Tape Diagrams—Online 11-5 Solve Proportions—pp. 384–385 11-6 Write Proportions—pp. 386–387 11-7 Proportions and Similar Figures—pp. 388–389 11-8 Use Proportions—pp. 390–391 12-9 Better Buy—pp. 430–431 **Application** 11-16 Problem Solving Applications: Mixed Review—pp. 406–407
c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	**Instruction** 12-1 Mental Math: Percent—pp. 414–415 12-3 Percentage of a Number—pp. 418–419 12-4 Find the Rate—pp. 420–421

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Understand ratio concepts and use ratio reasoning to solve problems.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
	12-5 Find the Original Number—pp. 422–423 12-6 Percent Problems—pp. 424–425 12-13 Problem Solving Strategy: Write an Equation—pp. 438–439 **Teacher's Edition** Strategic Intervention: 2. Find a percent of a number—TE pp. 413F–413G English Language Learners: Percentage of a Number—TE p. 413I Differentiated Instruction: Inclusion: Percent Problems, Sales Tax and Total Cost—TE p. 413J
d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	**Instruction** 13-1 Measure Metric Length—pp. 448–449 13-2 Measure Metric Capacity and Mass—pp. 450–451 13-3 Measure Customary Length—pp. 452–453 13-4 Measure Customary Capacity and Weight—pp. 454–455 13-5 Compute Customary Units—pp. 456–457 13-7 Relate Customary and Metric Units—pp. 460–461 *13-7A Use Proportions to Convert Units—Online **Teacher's Edition** Strategic Intervention: 1. Rename customary and metric units of measure—TE p. 447F

The Number System 6.NS

Understand ratio concepts and use ratio reasoning to solve problems.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?*	**Instruction** 8-5 Meaning of Division—pp. 258–259 *8-5A Dividing with Fractions—Online 8-6 Divide Fractions by Fractions—pp. 260–261 8-8 Divide with Whole and Mixed Numbers—pp. 264–265 8-9 Order of Operations with Fractions—pp. 266–267 **Application** 8-18 Problem Solving Applications: Mixed Review—pp. 284–285 **Teacher's Edition** Differentiated Instruction: Inclusion: Divide Fractions by Fractions—TE p. 249J

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Compute fluently with multi-digit numbers and find common factors and multiples.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
2. Fluently divide multi-digit numbers using the standard algorithm.	**Readiness** Skills Update: Trial Quotients—p. 10 Skills Update: Divide Whole Numbers—p. 11 **Instruction** 3-1 Short Division—pp. 88–89 3-3 Divide Whole Numbers—pp. 92–93 **Application** 3-14 Problem Solving Applications: Mixed Review—pp. 114–115 **Teacher's Edition** Differentiated Instruction: At Risk: Short Division; Physically Impaired: Divide Whole Numbers—TE p. 87J
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	**Readiness** Skills Update: Add Whole Numbers and Decimals—p. 5 Skills Update: Subtract Whole Numbers and Decimals—p. 6 **Instruction** 1-7 Addition of Whole Numbers and Decimals—pp. 46–47 1-8 Subtraction of Whole Numbers and Decimals—pp. 48–49 1-9 Addition and Subtraction of Decimals—pp. 50–51 2-1 Multiplication Patterns—pp. 66–67 2-4 Multiply with Decimals—pp. 72–73 3-4 Divide Decimals by 10, 100, and 1,000—pp. 94–95 3-5 Divide Decimals by Whole Numbers—pp. 96–97 3-6 Patterns with Tenths, Hundredths, and Thousandths—pp. 98–99 3-8 Decimal Divisors—pp. 102–103 3-9 Zeros in Division—pp. 104–105 **Application** 1-13 Problem Solving Applications: Mixed Review—pp. 58–59 2-8 Problem Solving Applications: Mixed Review—pp. 80–81 3-14 Problem Solving Applications: Mixed Review—pp. 114–115 **Teacher's Edition** Strategic Intervention: 5. Add and subtract decimals—TE pp. 33G Differentiated Instruction: Addition of Whole Numbers and Decimals—TE p. 33J Differentiated Instruction: Physically Impaired: Addition and Subtraction of Decimals; Inclusion: Addition of Whole Numbers and Decimals—TE p. 33J Strategic Intervention: 4. Multiply decimals to thousandths by whole numbers and decimals—TE p. 65G English Language Learners: Multiply with Decimals—TE p. 65H Differentiated Instruction: Accelerated Learners: Multiply with

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Compute fluently with multi-digit numbers and find common factors and multiples.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
	Decimals—TE p. 65J Strategic Intervention: 3. Divide whole numbers (to hundred thousands) and decimals (to thousandths)—TE p. 87G English Language Learners: Decimal Divisors; Divide Decimals by 10, 100, and 1000—TE p. 87H
4. 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. 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).*	**Readiness** Skills Update: Factors, Multiples, and Divisibility—p. 3 **Instruction** 6-5 Greatest Common Factor—pp. 186–187 *6-5A The Distributive Property and Common Factors—Online 6-6 Fractions in Simplest Form—pp. 188–189 6-9 Least Common Multiple—pp. 194–195 **Teacher's Edition** Strategic Intervention: 3. Find the greatest common factor (GCF) of a set of numbers; 4. Find the least common multiple (LCM) of a set of numbers—TE p. 177G English Language Learners: Greatest Common Factor—TE pp. 177H–177I

Apply and extend previous understandings of numbers to the system of rational numbers.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	**Instruction** 5-1 Integers—pp. 150–151 *5-1A Integers in the Real World—Online 5-2 Compare and Order Integers—pp. 152–153 **Teacher's Edition** Strategic Intervention: 1 Identify the integers just before and just after a given integer; 2. Compare and order integers—TE p. 149F English Language Learners: Temperature; Temperature; Compare and Order Integers—TE pp. 149H–149I
6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.	
a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.	**Instruction** 5-1 Integers—pp. 150–151 5-2 Compare and Order Integers—pp. 152–153
b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate	**Instruction** 14-5 Graph Ordered Pairs—pp. 504–505

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Apply and extend previous understandings of numbers to the system of rational numbers.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	14-6 Graph Reflections and Translations—pp. 506–507 **Teacher's Edition** Strategic Intervention: 2. Locate points on a four-quadrant grid—TE p. 495F English Language Learners: Graph Ordered Pairs—TE p. 495H Differentiated Instruction: At Risk: Graph Ordered Pairs; Accelerated Learners: Graph Ordered Pairs—TE p. 495J
c. 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. [See below.]	
c. 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.	**Instruction** 5-1 Integers—pp. 150–151 5-2 Compare and Order Integers—pp. 152–153 6-8 Fraction Sense—pp. 192–193 6-10 Compare Fractions—pp. 196–197 6-11 Order Fractions—p. 198 6-12 Relate Fractions to Decimals—pp. 200–201 6-14 Rename Decimals as Fractions—pp. 204–205 6-16 Rational Numbers—pp. 208–209 6-17 Compare and Order Rational Numbers—pp. 210–211 **Teacher's Edition** Strategic Intervention: 1 Identify the integers just before and just after a given integer; 2. Compare and order integers—TE p. 149F English Language Learners: Compare and Order Integers—TE p. 149I
c. 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.	**Instruction** 14-5 Graph Ordered Pairs—pp. 504–505 **Teacher's Edition** Strategic Intervention: 2. Locate points on a four-quadrant grid—TE p. 495F English Language Learners: Graph Ordered Pairs—TE p. 495H Differentiated Instruction: At Risk: Graph Ordered Pairs; Accelerated Learners: Graph Ordered Pairs—TE p. 495J
7. Understand ordering and absolute value of rational numbers.	
a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. *For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented*	**Instruction** 5-2 Compare and Order Integers—pp. 152–153 6-10 Compare Fractions—pp. 196–197 6-11 Order Fractions—pp. 198–199

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Apply and extend previous understandings of numbers to the system of rational numbers.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
from left to right.	6-16 Rational Numbers—pp. 208–209 6-17 Compare and Order Rational Numbers—pp. 210–211 **Teacher's Edition** Strategic Intervention: 1 Identify the integers just before and just after a given integer; 2. Compare and order integers—TE p. 149F English Language Learners: Compare and Order Integers—TE p. 149I
b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write $-3\ ^{oC} > -7\ ^{oC}$ to express the fact that $-3\ ^{oC}$ is warmer than $-7\ ^{oC}$.	**Instruction** 5-2 Compare and Order Integers—pp. 152–153 *5-2A Use Reasoning to Compare and Order Rational Numbers—Online 5-9 Temperature—pp. 166–167 6-10 Compare Fractions—pp. 196–197 6-11 Order Fractions—pp. 198–199 6-17 Compare and Order Rational Numbers—pp. 210–211
c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write $\|-30\| = 30$ to describe the size of the debt in dollars.*	**Instruction** 5-1 Integers (absolute value)—pp. 150–151 *5-2A Use Reasoning to Compare and Order Rational Numbers—Online 5-2 Compare and Order Integers—pp. 152–153 **Application** 5-5 Multiply Integers—p. 158 5-10 Problem Solving Strategy: Make a Table—pp. 168–169
d. Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.	**Instruction** *5-2A Use Reasoning to Compare and Order Rational Numbers—Online 5-2 Compare and Order Integers—pp. 152–153 **Application** 5-10 Problem Solving Strategy: Make a Table—pp. 168–169
8. 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.	**Readiness** 5-1 Integers (absolute value)—pp. 150–151 **Instruction** 14-5 Graph Ordered Pairs—pp. 504–505 *14-5A Distances and the Coordinate Plane—Online *14-5B Graphing Polygons—Online 14-10 Problem Solving Strategy: Use More Than One Strategy—pp. 514–515 **Teacher's Edition** Strategic Intervention: 2. Locate points on a four-quadrant grid—TE p. 495F English Language Learners: Graph Ordered Pairs—TE p. 495H Differentiated Instruction: At Risk: Graph Ordered Pairs; Accelerated Learners: Graph Ordered Pairs—TE p. 495J

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Expressions and Equations 6.EE

Apply and extend previous understandings of arithmetic to algebraic expressions.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
1. Write and evaluate numerical expressions involving whole-number exponents.	**Instruction** 1-3 Place Value and Exponents—pp. 38–39 2-5 Exponents—pp. 74–75 4-1 Order of Operations—pp. 122–123 *4-2A Expressions Involving Exponents—Online 4-3 Evaluate Algebraic Expressions—pp. 126–127 8-9 Order of Operations with Fractions—pp. 266–267 **Teacher's Edition** English Language Learners: Exponents—TE p. 65I Differentiated Instruction: Inclusion: Exponents—TE p. 65J Strategic Intervention: 3. Write the standard form for a number in exponential form—TE p. 121F
2. Write, read, and evaluate expressions in which letters stand for numbers.	
a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation "Subtract y from 5" as 5 – y.*	**Instruction** 1-10 Addition and Subtraction Expressions—pp. 52–53 3-10 Multiplication and Division Expressions—pp. 106–107 4-2 Translate Expressions—pp. 124–125 4-8 Use Formulas—pp. 136–137 **Application** 4-11 Problem Solving Applications: Mixed Review—pp. 142–143
b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.*	**Instruction** 1-10 Addition and Subtraction Expressions—pp. 52–53 3-10 Multiplication and Division Expressions—pp. 106–107 *4-1A Expressions—Online 4-2 Translate Expressions—pp. 124–125
c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas V = s3 and A = 6 s2 to find the volume and surface area of a cube with sides*	**Instruction** 1-11 Evaluate Addition and Subtraction Expressions—pp. 54–55 2-5 Exponents—pp. 74–75 3-11 Evaluate Multiplication and Division Expressions—pp. 108–109 4-1 Order of Operations—pp. 122–123

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Apply and extend previous understandings of arithmetic to algebraic expressions.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
of length s = 1/2.	*4-1A Expressions—Online 4-2 Translate Expressions—pp. 124–125 **Teacher's Edition** Strategic Intervention: 6. Evaluate algebraic expressions—TE pp. 33G Differentiated Instruction: Accelerated Learners: Evaluate Addition and Subtraction Expressions—TE p. 33J Strategic Intervention: 1.–2. Use order of operations to compute numerical expressions—TE p. 121F English Language Learners: Translate Expressions; Use Formulas; Order of Operations; Evaluate Algebraic Expressions—TE pp. 121H–121I Differentiated Instruction: At Risk: Order of Operations; Physically Impaired: Explore Order of Operations with a Calculator; Inclusion: Translate Expressions; Accelerated Learners: Use Formulas—TE p. 121J
3. Apply the properties of operations to generate equivalent expressions. *For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.*	**Readiness** Skills Update: Properties of Addition and Multiplication—p. 8 **Instruction** 4-3 Evaluate Algebraic Expressions—pp. 126–127 *4-3B Simplify Expressions—Online 7-1 Addition Properties: Fractions—pp. 222–223 8-3 Properties of Multiplication—pp. 254–255 **Teacher's Edition** English Language Learners: Addition Properties—TE p. 221I English Language Learners: Properties of Multiplication—TE p. 249I
4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). *For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.*	**Instruction** *4-3A Equivalent Expressions—Online

Reason about and solve one-variable equations and inequalities.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
5. Fluently divide multi-digit numbers using the standard algorithm.	**Instruction** 4-4 Equations and Inequalities—pp. 128–129 *4-4A Inequalities—Online **Application** Enrichment: Inequalities in One Variable—p. 173

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Reason about and solve one-variable equations and inequalities.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
	Teacher's Edition English Language Learners: Equations and Inequalities—TE p. 121H Differentiated Instruction: Inclusion: Equations and Inequalities—TE p. 121J
6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	**Instruction** 1-10 Addition and Subtraction Expressions—pp. 52–53 1-11 Evaluate Addition and Subtraction Expressions—pp. 54–55 1-12 Problem Solving Strategy: Write an Equation—pp. 56–57 3-10 Multiplication and Division Expressions—pp. 106–107 3-11 Evaluate Multiplication and Division Expressions—pp. 108–109 4-2 Translate Expressions—pp. 124–125 4-3 Evaluate Algebraic Expressions—pp. 126–127 4-5 Addition Equations—pp. 130–131 4-6 Subtraction Equations—pp. 132–133 4-7 Multiplication and Division Equations—pp. 134–135 4-10 Problem Solving Strategy: Use More Than One Step—pp. 140–141 7-9 Addition and Subtraction Equations with Fractions—pp. 238–239 8-11 Multiplication and Division Expressions with Fractions—pp. 270–271 8-12 Multiplication and Division Equations with Fractions—pp. 272–273 12-13 Problem Solving Strategy: Write an Equation—pp. 438–439 **Application** 4-11 Problem Solving Applications: Mixed Review—pp. 142–143 12-14 Problem Solving Applications: Mixed Review—pp. 440–441
7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.	**Instruction** 1-12 Problem Solving Strategy: Write an Equation—pp. 56–57 4-2 Translate Expressions—pp. 124–125 4-3 Evaluate Algebraic Expressions—pp. 126–127 4-5 Addition Equations—pp. 130–131 4-6 Subtraction Equations—pp. 132–133 4-7 Multiplication and Division Equations—pp. 134–135 *4-7A Write an Equation—Online 4-10 Problem Solving Strategy: Use More Than One Step—pp. 140–141 7-9 Addition and Subtraction Equations with Fractions—pp.

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Reason about and solve one-variable equations and inequalities.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
	238–239 8-12 Multiplication and Division Equations with Fractions—pp. 272–273 **Application** 4-11 Problem Solving Applications: Mixed Review—pp. 142–143
8. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	**Instruction** *4-4A Inequalities—Online *4-4B Write Inequalities—Online **Teacher's Edition** English Language Learners: Equations and Inequalities—TE p. 121H Differentiated Instruction: Inclusion: Equations and Inequalities—TE p. 121J

Represent and analyze quantitative relationships between dependent and independent variables.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
9. Use variables to represent two quantities in a real-world problem that change in 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. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.Fluently divide multi-digit numbers using the standard algorithm.*	**Instruction** 14-4 Functions and Ordered Pairs—pp. 502–503 *14-4A Independent and Dependent Variables—Online 14-8 Graph Functions—pp. 510–511 *14-8A Related Variables—Online 14-9 Algebraic Patterns—pp. 512–513 14-10 Problem Solving Strategy: Use More Than One Strategy—pp. 514–515

Geometry 6.G

Solve real-world and mathematical problems involving area, surface area, and volume.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
1. 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.	**Readiness** Skills Update: Perimeter and Area of Rectangles—p. 25 **Instruction** 13-9 Area of Rectangles and Squares—pp. 464–465 13-10 Area of Triangles and Parallelograms—pp. 466–467 13-11 Area of Trapezoids—pp. 468–469 *13-11A Plane Figures and Area—Online

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

Solve real-world and mathematical problems involving area, surface area, and volume.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
	Teacher's Edition Strategic Intervention: 3. Find the area and perimeter of a polygon—TE p. 447G English Language Learners: Area of Triangles and Parallelograms; Use Formulas to Solve Problems—TE pp. 447H–447I
2. 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 V = l w h and V = b h to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	**Instruction** 13-16 Volume of Prisms—pp. 478–479 *13-16A Use Partial Cubes to Find Volume—Online *13-16B Volume of a Prism—Online **Teacher's Edition** Strategic Intervention: 5. Find the surface area and volume of a rectangular prism—TE p. 447G
3. 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.	**Instruction** 14-5 Graph Ordered Pairs—pp. 504–505 *14-5B Graphing Polygons—Online 14-6 Graph Reflections and Translations—pp. 506–507 14-7 Graph Rotations—pp. 508–509
4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	**Instruction** 10-17 Solid Figures—pp. 362–363 *13-13A Use Nets to Find Surface Area—Online 13-14 Surface Area of Cubes, Rectangular Prisms, and Cylinders—pp. 474–475 13-15 Surface Area of Pyramids and Triangular Prisms—pp. 476–477 **Teacher's Edition** Differentiated Instruction: Accelerated Learners: Surface Area of Cubes, Rectangular Prisms, and Cylinders—TE p. 447J Blackline Masters: Nets—TE p. T64

Statistics and Probability 6.SP

Develop understanding of statistical variability.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical*	**Instruction** *9-6A Statistical Characteristics of a Data Set—Online

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Develop understanding of statistical variability.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
question because one anticipates variability in students' ages.	
2. 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.	**Instruction** 9-5 Apply Measures of Central Tendency and Range—pp. 300–301 9-6 Analyze Data—pp. 302–303 *9-7A Describe Data—Online 9-8 Stem–and–Leaf Plots—pp. 306–307
3. 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. Summarize and describe distributions.	**Instruction** 9-5 Apply Measures of Central Tendency and Range—pp. 300–301 9-6 Analyze Data—pp. 302–303 *9-7A Describe Data—Online **Teacher's Edition** Strategic Intervention: 3–4. Analyze data to find mean, median, mode, and range—TE p. 291G English Language Learners: Apply Measures of Central Tendency and Range—TE p. 291I

Summarize and describe distributions.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	**Instruction** 9-5 Apply Measures of Central Tendency and Range—pp. 300–301 9-6 Analyze Data—pp. 302–303 9-7 Box–and–Whisker Plots—pp. 304–305 *9-7A Describe Data—Online 9-8 Stem–and–Leaf Plots—pp. 306–307
5. Summarize numerical data sets in relation to their context, such as by:	
a. Reporting the number of observations.	**Instruction** *9-3A Summarize the Data—Online 9-4 Record and Interpret Data—pp. 298–299 *9-7A Describe Data—Online 9-8 Stem–and–Leaf Plots—pp. 306–307 9-13 Histograms—pp. 316–317
b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.	**Instruction** *9-3A Summarize the Data—Online *9-7A Describe Data—Online
c. 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	**Instruction** 9-5 Apply Measures of Central Tendency and Range—pp. 300–301 9-6 Analyze Data—pp. 302–303

*Online at progressinmathematics.com.

Unless otherwise noted, page numbers refer to the Gr. 6 *Progress in Mathematics* Teacher's Edition (TE) and Student Edition (SE).

April 5, 2012

Summarize and describe distributions.

Common Core State Standards for Mathematics	Sadlier Progress in Mathematics, Grade 6
deviations from the overall pattern with reference to the context in which the data were gathered.	*9-6B Choosing the Best Measures to Describe Data—Online 9-7 Box–and–Whisker Plots—pp. 304–305 *9-7A Describe Data—Online 9-8 Stem–and–Leaf Plots—pp. 306–307 **Application** 9-16 Problem Solving Applications: Mixed Review—pp. 322–323
d. 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.	**Instruction** *9-6B Choosing the Best Measures to Describe Data—Online

*Online at progressinmathematics.com.