



SADLIER

# Progress in Mathematics

Aligned to the Chapter 111.

## Texas Essential Knowledge and Skills for Mathematics

Subchapter A. Elementary, §111.6, Grade 4, Adopted 2012.

### Grade 4

(b) Knowledge and skills

(1) Mathematical process standards . . . . .	2
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## (b) Knowledge and skills

### GRADE 4 TEXAS ESSENTIAL KNOWLEDGE AND SKILLS FOR MATHEMATICS

(1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

(A) apply mathematics to problems arising in everyday life, society, and the workplace;

(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution and evaluating the problem-solving process and the reasonableness of the solution;

(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;

(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;

### SADLIER *PROGRESS IN MATHEMATICS* GRADE 4

At the beginning of each chapter in the Teacher's Edition are suggestions for tying mathematics to everyday life, including Literature Connection and Books to Read. Also in the TE is a Problem of the Day, The introduction to many lessons in the textbook focuses on a real-world problem that can be solved by applying the new skill. Many lessons conclude with a set of problem solving exercises—word problems that further connect the new skill or concept to everyday life. The final stage of the lesson plan in the TE—Part 5: Follow-Up, includes applications, such as “Real-World Connections” or “Problem Solving.” At the end of each chapter are two problem solving lessons (Problem Solving Strategy and Problem Solving Applications: Mixed Review).

Located immediately after the review of key Grade 3 skills at the beginning of the book, Introduction to Problem Solving presents a four-step problem solving model— Read, Plan, Solve, Check. After discussing the model, students examine then review three problem solving strategies. Instruction in each of the 14 chapters concludes with a Problem Solving Strategy lesson and a Problem Solving Applications: Mixed Review with exercises that engage students in applying a variety of strategies they've studied. Throughout the program, students are given step-by-step instructions that explain each process. And often they are directed to check the reasonableness of their solutions.

The lesson plan in the Teacher's Edition for many lessons offers ideas for using real objects and manipulatives—such as two-color counters, fraction strips, and base-ten blocks—to model the new concept. Depending on the topic, engaging activities involve tools and materials such as scissors, rulers, crayons, tape, or index cards. Located at the back of the TE are several blackline masters that can be used for learning activities. They include a place-value chart, grid and dot paper, number lines, fraction circles, and nets. There is also a wealth of online resources at [www.progressinmathematics.com](http://www.progressinmathematics.com)

Lessons in the program employ a rich variety of representations, including pictures of concrete models, diagrams, graphs, and symbols, to develop understanding of mathematical concepts and skills. Students reference these representations in their discussions and presentations. They also develop their reasoning ability using the specialized mathematical vocabulary that is highlighted and defined in context (and in the Glossary) in each lesson.

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(E) create and use representations to organize, record, and communicate mathematical ideas;

Lessons such as 1-12 Problem Solving Strategy: Make a Table or List, 7-9 Problem Solving Strategy: Use a Diagram/Graph, and 11-8: Problem Solving Strategy: Using a Drawing or Model—as well as the entire Chapter 7 Statistics and Probability—help young people learn to record, organize, and share data.

(F) analyze mathematical relationships to connect and communicate mathematical ideas; and

A part of the chapter opener in the Teacher’s Edition, the Math Connection: Critical Thinking/Finding Together feature provides suggestions for small group discussions of a challenging math problem. Students learn about relationships between concepts as they participate in these and other discussions that lead them discover connections between mathematical ideas. They participate in several logical processes—classify and sort, compare and contrast, make conjectures, distinguish between relevant and irrelevant information, engage in deductive and inductive reasoning, and justify and verify their solutions.

(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

In addition to several opportunities in daily lessons to question and discuss the presentation of new concepts by the teacher, students explain mathematical ideas in written and oral communication in the following activities: Math Journal, Write About It, and Tell About It.

(2) Number and operations. The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value. The student is expected to:

(A) interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left;

Skills Update: Hundreds—p. 1  
 1-4 Place Value—pp. 42–43  
 Objective(s): To write numbers in expanded form from standard form and vice versa; to count on and back by 10, 100, and 1000.

(B) represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals;

Chapter Opener—p. 35  
 1-1 Thousands—pp. 36–37  
 Objective(s): To understand place value through hundred thousands; to read and write numbers through hundred thousands.  
 1-2 What is One Million?—pp. 38–39  
 Objective(s): To explore the magnitude of 1,000,000.  
 1-3 Millions—pp. 40–41  
 Objective(s): To understand place value through hundred millions; to read and write numbers through hundred millions in words and in standard form.  
 1-4 Place Value—pp. 42–43  
 Objective(s): To write numbers in expanded form from standard form and vice versa; to count on and back by 10, 100, and 1000.  
 Ch. 1 Enrichment: Billions—p. 63  
 13-1 Tenths and Hundredths—pp. 412–413  
 Objective(s): To read and write decimals less than 1 through hundredths.  
 13-2 Decimals Greater Than One—pp. 414–415  
 Objective(s): To read and write decimals greater than 1 through hundredths.  
 13-3 Decimal Place Value—pp. 416–417  
 Objective(s): To understand decimal place value; to write decimals in standard and expanded forms

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(C) compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols  $>$ ,  $<$ , or  $=$ ;

Skills Update: Compare Whole Numbers—p. 2  
 1-2 What is One Million?: Use a Place-Value Chart to Compare—pp. 38–39  
 Objective(s): To explore the magnitude of 1,000,000.  
 1-6 Compare and Order Whole Numbers—pp. 46–47  
 Objective(s): To compare and order whole numbers.

(D) round whole numbers to a given place value through the hundred thousands place;

1-10 Rounding—pp. 54–55  
 Objective(s): To use rounding rules to round whole numbers and money amounts to a given place.  
 2-7 Estimate Sums and Differences—pp. 80–81  
 Objective(s): To use rounding to estimate sums and differences.  
 4-11 Products: Rounding to Estimate—pp. 146–147  
 Objective(s): To use rounding to estimate products.

(E) represent decimals, including tenths and hundredths, using concrete and visual models and money;

Skills Update: Recognize and Count Money—p. 3  
 1-8 Make Change—pp. 50–51  
 Objective(s): To make change and find its value.  
 1-9 Compare and Order Money—pp. 52–53  
 Objective(s): To compare and order money amounts through \$99.99.  
 13-1 Tenths and Hundredths—pp. 412–413  
 Objective(s): To read and write decimals less than 1 through hundredths.  
 13-2 Decimals Greater Than One—pp. 414–415  
 Objective(s): To read and write decimals greater than 1 through hundredths.  
 13-3 Decimal Place Value—pp. 416–417  
 Objective(s): To understand decimal place value; to write decimals in standard and expanded forms.

(F) compare and order decimals using concrete and visual models to the hundredths;

1-9 Compare and Order Money—pp. 52–53  
 Objective(s): To compare and order money amounts through \$99.99.  
 \*13-3A Compare Decimals with Models and Symbols—Online  
 Objective(s): To use visual models to compare decimals; to use the symbols  $<$ ,  $=$ ,  $>$  to compare decimals and justify conclusions using visual models.  
 13-4 Compare Decimals—pp. 418–419  
 Objective(s): To compare decimals.  
 13-5 Order Decimals—pp. 420–421  
 Objective(s): To order decimals from least to greatest and greatest to least.

(G) relate decimals to fractions that name tenths and hundredths; and

13-1 Tenths and Hundredths: Decimals and Fractions on a Number Line (relate decimals to fractions)—p. 413  
 Objective(s): To read and write decimals less than 1 through hundredths.  
 13-2 Decimals Greater Than One (relate decimals to fractions)—pp. 414–415  
 Objective(s): To read and write decimals greater than 1 through hundredths.  
 13-3 Decimal Place Value: Challenge (relate decimals to fractions)—p. 417  
 Objective(s): To understand decimal place value.

(H) determine the corresponding decimal to the tenths or hundredths place of a specified point on a number line.

13-1 Tenths and Hundredths: Decimals and Fractions on a Number Line—p. 413  
 Objective(s): To read and write decimals less than 1 through hundredths.  
 13-5 Order Decimals—pp. 420–421  
 Objective(s): To order decimals from least to greatest and greatest to least.

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(3) Number and operations. The student applies mathematical process standards to represent and generate fractions to solve problems. The student is expected to:	
(A) represent a fraction $a/b$ as a sum of fractions $1/b$ , where $a$ and $b$ are whole numbers and $b > 0$ , including when $a > b$ ;	Skills Update: Identify Fractions—p. 13 8-1 Write Fractions—pp. 266–267 Objective(s): To recognize the numerator and denominator of a fraction; to write the word name for a fraction and a fraction for the word name.
(B) decompose a fraction in more than one way into a sum of fractions with the same denominator using concrete and pictorial models and recording results with symbolic representations;	8-4 Equivalent Fractions—pp. 272–273 Objective(s): To identify equivalent fractions. 8-5 Write Equivalent Fractions—pp. 274–275 Objective(s): To find equivalent fractions by multiplying. *8-8A Compare Fractions Using Benchmarks—Online Objective(s): To use benchmark fractions to compare unlike fractions. To justify comparisons using visual models. 8-9 Compare Fractions—pp. 282–283 Objective(s): To compare fractions and mixed numbers. 8-10 Order Fractions—pp. 284–285 Objective(s): To order fractions. *9-1B Decompose Fractions—Online Objective(s): To decompose fractions into the sum of fractions with the same denominator in more than one way; to write an equation to represent the decomposition of a fraction. 9-3 Improper Fractions—pp. 300–301 Objective(s): To rename improper fractions as whole numbers or mixed numbers in simplest form.
(C) determine if two given fractions are equivalent using a variety of methods;	8-4 Equivalent Fractions—pp. 272–273 Objective(s): To identify equivalent fractions. *8-3A Model Equivalent Fractions—Online Objective(s): To use a ratio table to find equivalent fractions. To use visual models to justify equivalency. 8-5 Write Equivalent Fractions—pp. 274–275 Objective(s): To find equivalent fractions by multiplying. 8-9 Compare Fractions—pp. 282–283 Objective(s): To compare fractions and mixed numbers.
(D) compare two fractions with different numerators and different denominators and represent the comparison using the symbols $>$ , $=$ , or $<$ ;	*8-8A Compare Fractions Using Benchmarks—Online Objective(s): To use benchmark fractions to compare unlike fractions. To justify comparisons using visual models.
(E) represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations;	9-1 Add Fractions: Like Denominators—pp. 296–297 Objective(s): To add fractions with like denominators. *9-1B Decompose Fractions—Online Objective(s): To decompose fractions into the sum of fractions with the same denominator in more than one way; to write an equation to represent the decomposition of a fraction. *9-1C Use Models to Subtract Fractions—Online Objective(s): To use fraction strips to subtract fractions with like denominators; to use a number line to subtract fractions with like denominators. 9-2 Subtract Fractions: Like Denominators—pp. 298–299 Objective(s): To subtract fractions with like denominators.
(F) evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, $1/4$ , $1/2$ , $3/4$ , and 1, referring to the same whole; and	*8-8A Compare Fractions Using Benchmarks—Online Objective(s): To use benchmark fractions to compare unlike fractions; to justify comparisons using visual models. 9-1 Add Fractions: Like Denominators—pp. 296–297 Objective(s): To add fractions with like denominators.

(G) represent fractions and decimals to the tenths or hundredths as distances from zero on a number line.

- \*9-1A Use Models to Add Fractions—Online  
 Objective(s): To use models of fraction strips to add fractions with like denominators within 1; to use visual fraction strips to add like fractions within 1; to use a number line to add fractions with like denominators.
- \*9-1B Decompose Fractions—Online  
 Objective(s): To decompose fractions into the sum of fractions with the same denominator in more than one way; to write an equation to represent the decomposition of a fraction.
- \*9-1C Use Models to Subtract Fractions—Online  
 Objective(s): To use fraction strips to subtract fractions with like denominators; to use a number line to subtract fractions with like denominators.  
 9-2 Subtract Fractions: Like Denominators—pp. 298–299  
 Objective(s): To subtract fractions with like denominators.
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- 8-2 Fractions on a Number Line—pp. 268–269  
 Objective(s): To locate, compare, and order fractions on a number line.
- 8-3 Estimate Fractions (number lines)—pp. 270–271  
 Objective(s): To estimate a fraction of a region.
- 8-8 Mixed Numbers (number lines)—pp. 280–281  
 Objective(s): To read and write mixed numbers; to rename fractions as whole numbers.
- \*8-8A Compare Fractions Using Benchmarks—Online  
 Objective(s): To use benchmark fractions to compare unlike fractions; to justify comparisons using visual models.
- 8-9 Compare Fractions (number lines)—pp. 282–283  
 Objective(s): To compare fractions and mixed numbers.  
 To tell whether a fraction is closer to 0, to  $\frac{1}{2}$ , or to 1.
- 9-1 Add Fractions: Like Denominators (number lines)—pp. 296–297  
 Objective(s): To add fractions with like denominators.
- 9-2 Subtract Fractions: Like Denominators (number lines)—pp. 298–299  
 Objective(s): To subtract fractions with like denominators.
- \*9-1A Use Models to Add Fractions—Online  
 Objective(s): To use models of fraction strips to add fractions with like denominators within 1; to use visual fraction strips to add like fractions within 1; to use a number line to add fractions with like denominators.
- \*9-1C Use Models to Subtract Fractions—Online  
 Objective(s): To use fraction strips to subtract fractions with like denominators; to use a number line to subtract fractions with like denominators.
- 9-3 Improper Fractions (number lines)—pp. 300–301  
 Objective(s): To rename improper fractions as whole numbers or mixed numbers in simplest form.
- 13-3 Decimal Place Value: Challenge (decimals and fractions on number line)—p. 417  
 Objective(s): To understand decimal place value.
- 13-5 Order Decimals (number lines)—pp. 420–421  
 Objective(s): To order decimals from least to greatest and greatest to least.
- 13-6 Round Decimals (number lines)—pp. 422–423  
 Objective(s): To round decimals to the nearest tenth or nearest one.

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<p>(4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:</p>	
<p>(A) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm;</p>	<p>Skills Update: Addition and Subtraction Facts—p. 4 Chapter 2 Addition and Subtraction Concepts—pp. 68–91 Chapter 3 Addition and Subtraction—pp. 96–121</p>
<p>(B) determine products of a number and 10 or 100 using properties of operations and place value understandings;</p>	<p>4-2 Multiplication Models—pp. 128–129 Objective(s): To use models to understand multiplication. 4-3 Special Factors—pp. 130–131 Objective(s): To multiply tens, hundreds, and thousands by 1-digit numbers. 4-10 Patterns in Multiplication—pp. 144–145 Objective(s): To use patterns to multiply by 10 and by multiples of 10.</p>
<p>(C) represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15;</p>	<p>4-12 Multiply by Two-Digit Numbers—pp. 148–149 Objective(s): To multiply 2-digit whole numbers and money amounts by 2-digit multipliers without regrouping. 4-13 More Multiplying by Two-Digit Numbers—pp. 150–151 Objective(s): To multiply 2-digit whole numbers and money amounts by 2-digit multipliers with regrouping.</p>
<p>(D) use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties;</p>	<p>Skills Update: Meaning of Multiplication—p. 7 Skills Update: Multiplication Facts—p. 8 Chapter 4 Multiplication by One and Two Digits—pp. 126–159 *4-1A Number Patterns—Online Objective(s): To identify and generate number patterns; to use a function rule to find the output of a function; to find the rule for a function. *4-1B Use Multiplication to Compare Numbers—Online Objective(s): To interpret a multiplication equation as a comparison; to represent verbal statements of multiplicative comparisons as multiplication equations. *4-5A Multiply with Models—Online Objective(s): To use place-value models to multiply a 2-digit number by a 1-digit number with regrouping; to explain the calculation by using an equation. *4-6A Use Mental Math to Multiply—Online Objective(s): To break apart numbers to find the product of a 2- or 3-digit number and a 1-digit number; to use arrays and the distributive property to find products; to use partial products to find products. *4-11A Multiply with Area Models—Online Objective(s): To use area models and partial products to multiply 2-digit numbers by 2-digit multipliers; to explain the calculation by using an equation. *4-11B Break Apart Numbers to Multiply—Online Objective(s): To break apart numbers to find the product of a 2-digit number and a 2-digit number; to use partial products to find products. 5-2 Relate Multiplication and Division—pp. 166–167 Objective(s): To write related multiplication and division facts.</p>
<p>(E) represent the quotient of up to a four-digit whole number divided by a one-digit whole number using arrays, area models, or equations;</p>	<p>Skills Update: Understand Division—p. 10 Skills Update: Division Facts—p. 11 Skills Update: Relate Multiplication and Division—p. 12 Chapter 5 Divide by One Digit—pp. 164–201</p>

(F) use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor;

(G) round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers; and

(H) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders.

\*5-4A Use Bar Diagrams—Online

Objective(s): To use bar diagrams to solve multiplication and division problems; to solve word problems involving multiplicative comparisons; to distinguish multiplicative problems from additive comparison problems.

\*5-5A Use Models to Divide—Online

Objective(s): To use an array to model division of 2-digit dividends and 1-digit divisors.

\*5-13A Multistep Problems & Bar Diagrams—Online

Objective(s): To use a bar diagram to solve problems with more than one step.

\*5-5A Use Models to Divide—Online

Objective(s): To use an array to model division of 2-digit dividends and 1-digit divisors.

5-6 One-Digit Quotients—pp. 174–175

Objective(s): To divide 2-digit dividends by 1-digit divisors to find 1-digit quotients with remainders.

5-8 Two-Digit Quotients—pp. 178–179

Objective(s): To divide 2-digit dividends by 1-digit divisors to find 2-digit quotients with no remainders.

5-9 More Two-Digit Quotients—pp. 180–181

Objective(s): To divide 2-digit dividends by 1-digit divisors to find 2-digit quotients with remainders.

5-10 Three-Digit Quotients—pp. 182–183

Objective(s): To divide 3-digit dividends by 1-digit divisors to find 3-digit quotients with and without remainders.

5-11 More Quotients—pp. 184–185

Objective(s): To divide 3-digit dividends by 1-digit divisors to find 2-digit quotients with and without remainders.

5-12 Zeros in the Quotient—pp. 186–187

Objective(s): To divide 3-digit dividends by 1-digit divisors to find 3-digit quotients with one or more zeros.

5-13 Larger Numbers in Division—pp. 188–189

Objective(s): To divide 4-digit dividends by 1-digit divisors to find 3- and 4-digit quotients with and without remainders.

1-10 Rounding—pp. 54–55

Objective(s): To use rounding rules to round whole numbers and money amounts to a given place.

2-7 Estimate Sums and Differences—pp. 80–81

Objective(s): To use rounding to estimate sums and differences.

4-11 Products: Rounding to Estimate—pp. 146–147

Objective(s): To use rounding to estimate products.

4-15 Problem Solving Strategy: Work Backward—pp. 154–155

Objective(s): To use the strategy Work Backwards to solve problems.

4-16 Problem Solving Applications: Mixed Review—pp. 156–157

Strategy File: Use These Strategies: Work Backward, Choose the Operation, Logical Reasoning, Guess and Test

5-17 Problem Solving Strategy: Interpret the Remainder—pp. 196–197

Objective(s): To solve problems using the strategy Interpret the Remainder.

5-18 Problem Solving Applications: Mixed Review—pp. 198–199

Strategy File: Use These Strategies: Interpret the Remainder, Choose the Operation, Logical Reasoning, Write a Number Sentence

12-11 Problem Solving Strategy: Use More Than One Step

(interpret the remainder)—pp. 402–403

Objective(s): To solve problems using the Use More Than One Step strategy.



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(5) Algebraic reasoning. The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:

(A) represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity;

(B) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence;

(C) use models to determine the formulas for the perimeter of a rectangle ( $l + w + l + w$  or  $2l + 2w$ ), including the special form for perimeter of a square ( $4s$ ) and the area of a rectangle ( $l \times w$ ); and

(D) solve problems related to perimeter and area of rectangles where dimensions are whole numbers.

12-12 Problem Solving Applications: Mixed Review—pp. 404–405

**Strategy File: Use These Strategies:** Make a Table, Choose the Operation, Use More Than One Step, Find a Pattern, Use a Diagram/Graph, Interpret the Remainder

13-11 Problem Solving Strategy: Use More Than One Step—pp. 432–433

Objective(s): To solve problems that involve more than one step.

13-12 Problem Solving Applications: Mixed Review—pp. 434–435

**Strategy File: Use These Strategies:** Use More Than One Step, Use a Drawing or Model, Work Backward, Logical Reasoning, Find a Pattern, Use a Graph

2-4 Expressions and Variables—pp. 74–75

Objective(s): To write an addition or subtraction expression with a variable; to solve a mathematical expression with a variable.

2-5 Addition and Subtraction Sentences—pp. 76–77

Objective(s): To find missing addends, subtrahends, and minuends.

14-1 Equations—pp. 442–443

Objective(s): To write number sentences to solve problems.

14-2 Find Missing Numbers—pp. 444–445

Objective(s): To find missing numbers in equations.

Problem Solving: Use More Than One Step—pp. 32, 34, 60, 71, 85, 89, 95, 99, 101, 109, 111, 113, 117, 118–119, 131, 135, 139, 141, 153, 154, 156–157, 165, 189, 195, 198, 209, 213, 215, 217, 219, 221, 223, 225, 230–231, 232–233, 241, 249, 259, 261, 289, 315, 316–317, 318–319, 350, 374–375, 397, 402–403, 404–305, 429, 432–433, 434–435, 454, 455, 456–457

5-4 Number Patterns (input-output tables)—pp. 170–171

Objective(s): To create and extend number patterns.

14-3 Functions (input-output tables)—pp. 446–447

Objective(s): To complete function tables.

14-4 Graph Equations (input-output tables)—pp. 448–449

Objective(s): To complete function tables and write values of  $x$  and  $y$  as ordered pairs; to graph sets of ordered pairs on a coordinate grid.

Skills Update: Perimeter—p. 20

11-1 Use Perimeter Formulas—pp. 358–359

Objective(s): To use formulas to find the perimeters of rectangles, squares, and equilateral triangles.

11-2 Use Area Formulas—pp. 360–361

Objective(s): To use formulas to find the areas of squares and rectangles.

11-3 Perimeter and Area—pp. 362–363

Objective(s): To understand that figures with the same area can have different perimeters; to understand that figures with the same perimeter can have different areas; to find the area and perimeter of complex figures.

Skills Update: Perimeter—p. 20

11-1 Use Perimeter Formulas—pp. 358–359

Objective(s): To use formulas to find the perimeters of rectangles, squares, and equilateral triangles.

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(6)	Geometry and measurement. The student applies mathematical process standards to analyze geometric attributes in order to develop generalizations about their properties. The student is expected to:
(A)	identify points, lines, line segments, rays, angles, and perpendicular and parallel lines;
(B)	identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure;
(C)	apply knowledge of right angles to identify acute, right, and obtuse triangles; and
(D)	classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.

11-2 Use Area Formulas—pp. 360–361 Objective(s): To use formulas to find the areas of squares and rectangles.
11-3 Perimeter and Area—pp. 362–363 Objective(s): To understand that figures with the same area can have different perimeters; to understand that figures with the same perimeter can have different areas; to find the area and perimeter of complex figures.
*11-3A Perimeter and Area Formulas—Online Objective(s): To apply the area and perimeter formulas for rectangles in real world problems to find missing dimensions.
11-9 Problem Solving Applications: Mixed Review—pp. 374–375 <u>Strategy File: Use These Strategies:</u> Use a Drawing or Model, Use More Than One Step, Logical Reasoning, Write a Number Sentence, Guess and Test, Find a Pattern
10-1 Points, Lines, and Line Segments—pp. 326–327 Objective(s): To identify, name, and draw points, lines, and line segments.
10-2 Rays and Angles—pp. 328–329 Objective(s): To identify and name rays and angles and the parts of an angle; to determine whether an angle is acute, obtuse, right, or straight.
*10-2A Measure Angles—Online Objective(s): To measure angles with a protractor; to sketch an angle of a specified measure.
*10-2B Unknown Angle Measures—Online Objective(s): To determine that the measures of adjacent angles are summative; to use the measures of 2 adjacent angles to find the measure of the combined angle; to write and solve an equation to find unknown angles on a diagram.
10-3 Parallel and Perpendicular Lines—pp. 330–331 Objective(s): To classify sets of lines as intersecting, perpendicular, or parallel.
Skills Update: Lines of Symmetry—p. 22
*10-7A Symmetry—Online Objective(s): To identify line symmetry; to identify line-symmetric figures; to draw lines of symmetry
10-10 Turns—pp. 344–345 Objective(s): To identify turns and turn images; to recognize whether a figure has half-turn symmetry.
10-2 Rays and Angles—pp. 328–329 Objective(s): To identify and name rays and angles and the parts of an angle; to determine whether an angle is acute, obtuse, right, or straight.
10-7 Triangles—pp. 338–339 Objective(s): To identify and classify right, isosceles, equilateral, and scalene triangles.
10-6 Quadrilaterals—pp. 336–337 Objective(s): To identify, name, and classify quadrilaterals.
10-7 Triangles—pp. 338–339 Objective(s): To identify and classify right, isosceles, equilateral, and scalene triangles.

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<p>(7) Geometry and measurement. The student applies mathematical process standards to solve problems involving angles less than or equal to 180 degrees. The student is expected to:</p> <p>(A) illustrate the measure of an angle as the part of a circle whose center is at the vertex of the angle that is "cut out" by the rays of the angle. Angle measures are limited to whole numbers;</p> <p>(B) illustrate degrees as the units used to measure an angle, where <math>1/360</math> of any circle is one degree and an angle that "cuts" <math>n/360</math> out of any circle whose center is at the angle's vertex has a measure of <math>n</math> degrees. Angle measures are limited to whole numbers;</p> <p>(C) determine the approximate measures of angles in degrees to the nearest whole number using a protractor;</p> <p>(D) draw an angle with a given measure; and</p> <p>(E) determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures.</p>	<p>*10-1A Angle Measure (as part of a circle whose center is at the vertex)—Online Objective(s): To understand that angle measure is a measure of a turn; to compare angle measures by visual estimation or by given measure; to recognize angles that have approximately equally measure.</p> <p>10-2 Rays and Angles—pp. 328–329 Objective(s): To identify and name rays and angles and the parts of an angle; to determine whether an angle is acute, obtuse, right, or straight.</p> <p>*10-2A Measure Angles—Online Objective(s): To measure angles with a protractor; to sketch an angle of a specified measure.</p> <p>10-2 Rays and Angles—pp. 328–329 Objective(s): To identify and name rays and angles and the parts of an angle; to determine whether an angle is acute, obtuse, right, or straight.</p> <p>*10-2A Measure Angles—Online Objective(s): To measure angles with a protractor; to sketch an angle of a specified measure.</p> <p>*10-2A Measure Angles—Online Objective(s): To measure angles with a protractor; to sketch an angle of a specified measure.</p> <p>*10-2B Unknown Angle Measures—Online Objective(s): To determine that the measures of adjacent angles are summative; to use the measures of 2 adjacent angles to find the measure of the combined angle; to write and solve an equation to find unknown angles on a diagram.</p>
<p>(8) Geometry and measurement. The student applies mathematical process standards to select appropriate customary and metric units, strategies, and tools to solve problems involving measurement. The student is expected to:</p> <p>(A) identify relative sizes of measurement units within the customary and metric systems;</p>	<p>6-2 Rename Units of Length—pp. 208–209 Objective(s): To rename and compare customary units of length; to develop a sense of the length of a mile.</p> <p>6-4 Customary Units of Capacity—pp. 212–213 Objective(s): To explore customary units of capacity; to rename customary units of capacity.</p> <p>6-5 Customary Units of Weight—pp. 214–215 Objective(s): To use the customary units ounce, pound, and ton; to rename and compare customary units of weight.</p> <p>6-6 Measure with Metric Units—pp. 216–217 Objective(s): To estimate and measure lengths to the nearest centimeter and decimeter.</p> <p>6-7 Work with Metric Units—pp. 218–219 Objective(s): To use metric units to measure length and interpret a map; to rename and compare metric units of length.</p> <p>6-8 Metric Units of Capacity—pp. 220–221 Objective(s): To use metric units of capacity; to rename and compare metric units of capacity.</p>

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(B) convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table; and

(C) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate.

6-9 Metric Units of Mass—pp. 222–223

Objective(s): To use metric units of mass; to rename and compare metric units of mass.

6-2 Rename Units of Length—pp. 208–209

Objective(s): To rename and compare customary units of length; to develop a sense of the length of a mile.

6-4 Customary Units of Capacity—pp. 212–213

Objective(s): To explore customary units of capacity; to rename customary units of capacity.

6-5 Customary Units of Weight—pp. 214–215

Objective(s): To use the customary units ounce, pound, and ton; to rename and compare customary units of weight.

6-6 Measure with Metric Units—pp. 216–217

Objective(s): To estimate and measure lengths to the nearest centimeter and decimeter.

6-7 Work with Metric Units—pp. 218–219

Objective(s): To use metric units to measure length and interpret a map; to rename and compare metric units of length.

6-8 Metric Units of Capacity—pp. 220–221

Objective(s): To use metric units of capacity; to rename and compare metric units of capacity.

6-9 Metric Units of Mass—pp. 222–223

Objective(s): To use metric units of mass; to rename and compare metric units of mass.

6-1 Measure with Inches—pp. 206–207

Objective(s): To measure length to the nearest inch, half inch, and quarter inch.

To estimate length to the nearest inch.

6-2 Rename Units of Length—pp. 208–209

Objective(s): To rename and compare customary units of length; to develop a sense of the length of a mile.

6-3 Compute Customary Units—pp. 210–211

Objective(s): To add and subtract customary units of length.

6-4 Customary Units of Capacity—pp. 212–213

Objective(s): To explore customary units of capacity; to rename customary units of capacity.

6-5 Customary Units of Weight—pp. 214–215

Objective(s): To use the customary units ounce, pound, and ton; to rename and compare customary units of weight.

6-6 Measure with Metric Units—pp. 216–217

Objective(s): To estimate and measure lengths to the nearest centimeter and decimeter.

6-7 Work with Metric Units—pp. 218–219

Objective(s): To use metric units to measure length and interpret a map; to rename and compare metric units of length.

6-8 Metric Units of Capacity—pp. 220–221

Objective(s): To use metric units of capacity; to rename and compare metric units of capacity.

6-9 Metric Units of Mass—pp. 222–223

Objective(s): To use metric units of mass; to rename and compare metric units of mass.

\*6-9A Represent Measures on a Number Line—Online

Objective(s): To represent measures on a number line; to solve measurement problems involving the four operations.

6-10 Temperature—pp. 224–225

Objective(s): To measure and compare temperatures using the Fahrenheit and Celsius scales; to compute temperatures.

6-11 Time—pp. 226–227

Objective(s): To tell time to the minute.

\*6-11A Rename Measures—Online

Objective(s): To rename measurement and represent as number pairs; to record equivalent measures in a table.

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(9) Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to:

(A) represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions; and

(B) solve one- and two-step problems using data in whole number, decimal, and fraction form in a frequency table, dot plot, or stem-and-leaf plot.

(10) Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to:

(A) distinguish between fixed and variable expenses;

(B) calculate profit in a given situation;

(C) compare the advantages and disadvantages of various savings options;

(D) describe how to allocate a weekly allowance among spending; saving, including for college; and sharing; and

(E) describe the basic purpose of financial institutions, including keeping money safe, borrowing money, and lending.

6-12 Elapsed Time—pp. 228–229  
Objective(s): To find elapsed time on a clock and on a calendar.  
6-13 Problem Solving Strategy: Use More Than One Step—pp. 230–231  
Objective(s): To solve problems using more than one step.  
6-14 Problem Solving Applications: Mixed Review—pp. 232–233  
Strategy File: Use These Strategies: Make a Table or List, Choose the Operation, Guess and Test, Write a Number Sentence

7-4 Surveys and Line Plots—pp. 246–247  
Objective(s): To interpret and make line plots; to use line plots to find mode and range; to interpret stem-and-leaf plots.

7-4 Surveys and Line Plots—pp. 246–247  
Objective(s): To interpret and make line plots; to use line plots to find mode and range; to interpret stem-and-leaf plots.

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