



SADLIER

Progress in Mathematics

Aligned to the Chapter 111.

Texas Essential Knowledge and Skills for Mathematics

Subchapter A. Elementary, §111.7, Grade 5, Adopted 2012.

Grade 5

(b) Knowledge and skills

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(b) Knowledge and skills

GRADE 5 TEXAS ESSENTIAL KNOWLEDGE AND SKILLS FOR MATHEMATICS	SADLIER <i>PROGRESS IN MATHEMATICS</i> GRADE 5
(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;	<p>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).</p>
(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;	<p>Located immediately after the review of key Grade 4 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.</p>
(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;	<p>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</p>
(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;	<p>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.</p>

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

Lessons such as Introduction to Problem Solving: Make a Table, 3-15 Problem Solving Strategy: Make a Table, and 4-11 Problem Solving Strategy: Make an Organized List—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 positive rational numbers and understand relationships as related to place value. The student is expected to:

(A) represent the value of the digit in decimals through the thousandths using expanded notation and numerals;

1-4 Thousandths—pp. 36–37
Objective(s): To read and write decimals through thousandths in words and in standard form.
*1-4A Decimals and Expanded Form—Online
Objective(s): To write decimals through thousandths in expanded form and vice versa; to recognize that in a multi-digit number, a digit in one place represents 1/10 of what it represents in the place to its left.
1-5 Decimals Greater Than One—pp. 38–39
Objective(s): To read and write decimals with values greater than one in words and in standard form.

(B) compare and order two decimals to thousandths and represent comparisons using the symbols $>$, $<$, or $=$; and

1-6 Compare and Order Numbers: Compare and Order Decimals—p. 41
Objective(s): To compare and order whole numbers and decimals.

(C) round decimals to tenths or hundredths.

1-7 Rounding Numbers: Rounding Decimals and Money—p. 43
Objective(s): To round whole numbers, decimals, and money to a given place or to the greatest place.

(3) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy. The student is expected to:

(A) estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division;

Skills Update: Round Whole Numbers—p. 3
1-9 Estimate Sums and Differences—pp. 46–47
Objective(s): To estimate sums and differences using front-end estimation and rounding.

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- (B) multiply with fluency a three-digit number by a two-digit number using the standard algorithm;

- (C) solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm;

- (D) represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models;

- (E) solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers;

- 2-5 Estimate Products—pp. 74–75
Objective(s): To estimate products of whole numbers and money amounts.
- 2-11 Problem-Solving Strategy: Use More Than One Step (estimate then multiply)—pp. 86–87
Objective(s): To find and utilize hidden information to solve problems; to solve problems using more than one step.
- 5-12 Estimate Sums and Differences of Mixed Numbers—pp. 186–187
Objective(s): To estimate sums and differences of mixed numbers.
- 6-15 Estimate Products and Quotients with Mixed Numbers—pp. 226–227
Objective(s): To use rounding to estimate products and quotients with mixed numbers; to use compatible numbers to estimate products and quotients with mixed numbers.
- 8-4 Estimate Decimal Sums—pp. 274–275
Objective(s): To estimate decimal sums.
- 8-7 Estimate Decimal Differences—pp. 280–281
Objective(s): To estimate decimal differences.
- 9-2 Estimate Decimal Products—pp. 296–297
Objective(s): To use rounding to estimate decimal products; to use clustering to estimate decimal sums.
- 9-9 Estimate Decimal Quotients—pp. 310–311
Objective(s): To estimate decimal quotients.
- 9-10 Estimate with Money—pp. 312–313
Objective(s): To estimate quotients of money amounts; to round quotients to the nearest cent.

- 2-7 Multiply Two Digits—pp. 78–79
Objective(s): To multiply a whole number by a 2-digit multiplier.

- 3-11 Two-Digit Divisors—pp. 116–117
Objective(s): To divide 3- and 4-digit dividends by 2-digit divisors.

- *9-3A Model Multiplying Two Decimals—Online
Objective(s): To use an array model to multiply two decimals; to use the properties of operations to multiply decimals.
- 9-4 Multiply Decimals by Decimals—pp. 300–301
Objective(s): To multiply decimals by decimals.

- 2-10 Multiplication with Money—pp. 84–85
Objective(s): To multiply money amounts.
- 2-11 Problem-Solving Strategy: Use More Than One Step—pp. 86–87
Objective(s): To find and utilize hidden information to solve problems; to solve problems using more than one step.
- 2-12 Problem Solving Applications: Mixed Review—pp. 88–89
- *9-3A Model Multiplying Two Decimals—Online
Objective(s): To use an array model to multiply two decimals; to use the properties of operations to multiply decimals.
- 9-4 Multiply Decimals by Decimals—pp. 300–301
Objective(s): To multiply decimals by decimals.
- 9-5 Zeros in the Product—pp. 302–303
Objective(s): To write zeros as placeholders in decimal products.
- 9-11 Problem Solving Strategy: Write a Number Sentence—pp. 314–315
Objective(s): To solve problems by writing number sentences.
- 9-12 Problem Solving Applications: Mixed Review—pp. 316–317

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- (F) represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models;

- 3-13 Divide Money—pp. 120–121
 Objective(s): To divide money amounts by 1- and 2-digit divisors.
 3-16 Problem Solving Applications: Mixed Review—pp. 126–127
 9-6 Divide by 10, 100, and 1000—pp. 304–305
 Objective(s): To divide decimals and whole numbers by 10, 100, and 1000.
 *9-6A Model Dividing a Decimal by a Whole Number (pictorial models)—Online
 Objective(s): To use models to divide a decimal by any whole number.
 9-7 Divide Decimals by Whole Numbers (using objects and pictorial models)—TE/SE pp. 306–307
 Objective(s): To divide decimals by 1-digit whole numbers.
 9-8 Zeros in Division (using objects and pictorial models)—pp. 308–309
 Objective(s): To divide decimals by 1-digit whole numbers, using zeros as placeholders in the quotient or dividend.
 *Division of decimals by two-digit whole number introduced in Grade 6: 3-5 Divide Decimals by Whole Numbers.

- (G) solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm;

- 3-13 Divide Money—pp. 120–121
 Objective(s): To divide money amounts by 1- and 2-digit divisors.
 3-16 Problem Solving Applications: Mixed Review—pp. 126–127
 9-6 Divide by 10, 100, and 1000—pp. 304–305
 Objective(s): To divide decimals and whole numbers by 10, 100, and 1000.
 *9-6A Model Dividing a Decimal by a Whole Number—Online
 Objective(s): To use models to divide a decimal by any whole number.
 9-7 Divide Decimals by Whole Numbers—pp. 306–307
 Objective(s): To divide decimals by 1-digit whole numbers.
 9-8 Zeros in Division—pp. 308–309
 Objective(s): To divide decimals by 1-digit whole numbers, using zeros as placeholders in the quotient or dividend.
 *Division of decimals by two-digit whole number introduced in Grade 6: 3-5 Divide Decimals by Whole Numbers.

- (H) represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations;

- *5-1A Add Fractions with Unlike Denominators—Online
 Objective(s): To model adding unlike fractions; to find the sum in simplest form of two fractions with unlike denominators.
 5-2 Add Fractions: Unlike Denominators—pp. 166–167
 Objective(s): To add fractions with unlike denominators.
 5-3 Add Three Fractions—pp. 168–169
 Objective(s): To add three fractions; to apply the associative property of addition to fractions.
 5-4 Add Mixed Numbers—pp. 170–171
 Objective(s): To add mixed numbers with like and unlike denominators.
 5-5 Rename Mixed Number Sums—pp. 172–173
 Objective(s): To add mixed numbers, renaming sums.
 5-6 Rename Differences: Like Denominators—pp. 174–175
 Objective(s): To rename the differences of two fractions with like denominators.
 *5-6A Subtract Fractions with Unlike Denominators—Online
 Objective(s): To model subtracting unlike fractions; to find the difference in simplest form of two fractions with unlike denominators.
 5-7 Subtract Fractions: Unlike Denominators—pp. 176–177
 Objective(s): To subtract fractions with compatible unlike denominators.
 5-8 More Subtraction of Fractions—pp. 178–179
 Objective(s): To subtract fractions with unlike denominators that are not compatible.

(I) represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models;

(J) represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as $1/3 \div 7$ and $7 \div 1/3$ using objects and pictorial models, including area models;

(K) add and subtract positive rational numbers fluently; and

(L) divide whole numbers by unit fractions and unit fractions by whole numbers.

*5-8A Subtract Fractions and Whole Numbers from Mixed Numbers—Online

Objective(s): To subtract a fraction from a mixed number using visual models; to subtract a whole number from a mixed number using visual models.

5-9 Subtract Mixed Numbers—pp. 180–181

Objective(s): To subtract mixed numbers.

*5-9A Use Benchmark Fractions—Online

Objective(s): To use benchmark fractions and number sense to estimate and assess the reasonableness of answers to additions and subtractions involving fractions.

5-10 Subtraction with Renaming—pp. 182–183

Objective(s): To subtract mixed numbers from whole numbers.

5-11 More Renaming in Subtraction—pp. 184–185

Objective(s): To subtract mixed numbers, renaming the minuends.

5-12 Estimate Sums and Differences of Mixed Numbers—pp. 186–187

Objective(s): To estimate sums and differences of mixed numbers.

5-13 Problem Solving Strategy: Work Backward—pp. 188–189

Objective(s): To solve problems by working backward.

5-14 Problem Solving Applications: Mixed Review—pp. 190–191

*6-2A Use Properties to Multiply Fractions and Whole Numbers—Online

Objective(s): To interpret the product of $a/b \times q$ as a parts of a partition of q into b equal parts.

6-3 Multiply Fractions and Whole Numbers—pp. 202–203

Objective(s): To multiply a fraction and a whole number.

6-4 Multiply Fractions Using the GCF (multiply a fraction and whole number)—pp. 204–205

Objective(s): To multiply fractions using the greatest common factor (GCF).

6-17 Problem Solving Applications: Mixed Review—pp. 230–231

6-8 Division of Fractions—pp. 212–213

Objective(s): To explore the division of whole numbers and fractions by fractions, using models.

6-10 Divide Whole Numbers by Fractions—pp. 216–217

Objective(s): To divide a whole number by a fraction.

*6-10A Division with a Unit Fraction—Online

Objective(s): To use an equation to represent a problem; to create a story context for division of a whole number by a unit fraction.

6-12 Divide Fractions by Whole Numbers—pp. 220–221

Objective(s): To divide a fraction by a whole number

Chapter 1 Place Value, Addition, and Subtraction—pp. 30–59

Chapter 5 Fractions: Addition and Subtraction—pp. 164–191

Chapter 8 Decimals: Addition and Subtraction—pp. 268–287

6-8 Division of Fractions—pp. 212–213

Objective(s): To explore the division of whole numbers and fractions by fractions, using models.

6-10 Divide Whole Numbers by Fractions—pp. 216–217

Objective(s): To divide a whole number by a fraction.

*6-10A Division with a Unit Fraction—Online

Objective(s): To use an equation to represent a problem; to create a story context for division of a whole number by a unit fraction.

6-12 Divide Fractions by Whole Numbers—pp. 220–221

Objective(s): To divide a fraction by a whole number

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(4) Algebraic reasoning. The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to:	
(A) identify prime and composite numbers;	4-1 Explore Prime and Composite Numbers—pp. 134–135 Objective(s): To explore prime and composite numbers using rectangular arrays. 4-2 Factors, Primes, and Composites—pp. 136–137 Objective(s): To find the factors of a number; to identify prime and composite numbers; to find the prime factorization of a number
(B) represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity;	14-3 Addition and Subtraction Equations—pp. 444–445 Objective(s): To solve addition and subtraction equations using properties of equality. 14-4 Multiplication and Division Equations—pp. 446–447 Objective(s): To solve multiplication and division equations using properties of equality. 14-16 Problem Solving Strategy: Write an Equation—pp. 470–471 Objective(s): To solve problems by writing an equation.
(C) generate a numerical pattern when given a rule in the form $y = ax$ or $y = x + a$ and graph;	14-14 Function Tables—pp. 466–467 Objective(s): To complete a function table; to find the rule given a function table 14-15 Functions and Coordinate Graphs—pp. 468–469 Objective(s): To use a rule or equation to make a function table; to graph a function on a coordinate grid.
(D) recognize the difference between additive and multiplicative numerical patterns given in a table or graph;	*14-13A Using Coordinate Graphs—Online Objective(s): To use the coordinate plane to solve real-world problems. *14-13C Compare Sequences—Online Objective(s): To identify the relationships between corresponding terms in two sequences. *Related content— 2-3 Mental Math: Special Factors—pp. 70–71 Objective(s): To use the pattern for multiplying by 10 and multiples of 10 as a shortcut. 2-4 Patterns in Multiplication—pp. 72–73 Objective(s): To use a pattern as a shortcut when multiplying whole numbers by 100, 1000, or their multiples.
(E) describe the meaning of parentheses and brackets in a numeric expression;	3-14 Order of Operations (parentheses)—pp. 122–123 Objective(s): To use the order of operations to evaluate numerical expressions. *3-14A Variables and Expressions (parentheses, brackets)—Online Objective(s): To write numerical expressions to describe a series of operations given in a word phrase; to write algebraic expressions to describe a series of operations given in a word phrase; to compare expressions without evaluating them
(F) simplify numerical expressions that do not involve exponents, including up to two levels of grouping;	*1-4A Decimals and Expanded Form (simplify each term)—Online Objective(s): To write decimals through thousandths in expanded form and vice versa; to recognize that in a multi-digit number, a digit in one place represents 1/10 of what it represents in the place to its left. 3-14 Order of Operations (simplifying numerical expressions)—pp. 122–123 Objective(s): To use the order of operations to evaluate numerical expressions.

(G) use concrete objects and pictorial models to develop the formulas for the volume of a rectangular prism, including the special form for a cube ($V = l \times w \times h$, $V = s \times s \times s$, and $V = Bh$); and

(H) represent and solve problems related to perimeter and/or area and related to volume.

(5) Geometry and measurement. The student applies mathematical process standards to classify two-dimensional figures by attributes and properties. The student is expected to classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties.

*3-14A Variables and Expressions (simplify numerical expressions)—Online

Objective(s): To write numerical expressions to describe a series of operations given in a word phrase; to write algebraic expressions to describe a series of operations given in a word phrase; to compare expressions without evaluating them.

6-4 Multiply Fractions Using the GCF (simplify fractions using GCF)—pp. 204–205

Objective(s): To multiply fractions using the greatest common factor (GCF).

*8-2B Mental Math Add Decimals (simplify)—Online

Objective(s): To use the commutative and associative properties of addition and mental math to add decimals.

14-1 Algebraic Expressions and Equations: Evaluate Algebraic Expressions or Equations (simplify expressions)/Challenge (simplify each expression)—pp. 440–441

Objective(s): To distinguish between and write algebraic expressions and equations; to evaluate algebraic expressions and equations.

12-11 Volume—pp. 402–403

Objective(s): To find the volume of a rectangular prism using a formula.

*See lesson plan in the Teacher’s Edition for activities that use concrete objects to develop an understanding of how to calculate the volume of a rectangular prism.

*12-11A Find Volume (volume formulas: $V = l \times w \times h$ and $V = Bh$)—Online

Objective(s): To find the volume of a right rectangular prism in terms of the height and area of the base.

10-7 Perimeter—pp. 336–337

Objective(s): To find the perimeter of a polygon.

*12-5A Find Areas of Rectangles and Squares—Online

Objective(s): To find the area of a rectangle with fractional dimensions by tiling with unit squares of the appropriate unit fraction side lengths.

12-6 Areas of Rectangles and Squares—pp. 392–393

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

12-7 Areas of Parallelograms and Triangles—pp. 394–395

Objective(s): To explore finding the area of a parallelogram using its related rectangle and the area of a triangle using its related parallelogram.

12-11 Volume—pp. 402–403

Objective(s): To find the volume of a rectangular prism using a formula.

*12-11A Find Volume—Online

Objective(s): To find the volume of a right rectangular prism in terms of the height and area of the base.

10-5 Triangles—pp. 332–333

Objective(s): To classify triangles; to understand that the sum of the angles of a triangle is 180° .

10-6 Quadrilaterals—pp. 334–335

Objective(s): To classify quadrilaterals and identify diagonals of polygons; to understand that the sum of the angles of a quadrilateral is 360° .

*10-6A Classify Quadrilaterals—Online

Objective(s): To understand that attributes belonging to a category of figures also belong to its subcategories; to classify two-dimensional figures into a hierarchy based on properties.

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<p>(6) Geometry and measurement. The student applies mathematical process standards to understand, recognize, and quantify volume. The student is expected to:</p> <p>(A) recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (n cubic units) needed to fill it with no gaps or overlaps if possible; and</p> <p>(B) determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base.</p>	<p>12-10 Cubic Measure—pp. 400–401 Objective(s): To find the cubic measure (volume) of a solid figure by counting cubic units; to relate metric cubic measures to metric units of mass and capacity.</p> <p>12-11 Volume—pp. 402–403 Objective(s): To find the volume of a rectangular prism using a formula.</p> <p>*12-11A Find Volume—Online Objective(s): To find the volume of a right rectangular prism in terms of the height and area of the base.</p>
<p>(7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement. The student is expected to solve problems by calculating conversions within a measurement system, customary or metric.</p>	<p>11-1 Relate Customary Units of Length—pp. 358–359 Objective(s): To estimate and measure, using customary units of length, to the nearest inch, 1/2 inch, 1/4 inch, and 1/8 inch; to rename customary units of length.</p> <p>11-2 Relate Customary Units of Capacity—pp. 360–361 Objective(s): To rename and compare customary units of capacity.</p> <p>11-3 Relate Customary Units of Weight—pp. 362–363 Objective(s): To estimate, measure, rename, and compare customary units of weight.</p> <p>12-1 Metric Measurement—pp. 382–383 Objective(s): To review the standard metric units- meter (m), liter (L), and gram (g), and the measuring tools associated with each; to rename metric units.</p> <p>12-2 Relate Metric Units of Length—pp. 384–385 Objective(s): To relate and choose appropriate metric units of length; to measure to the nearest millimeter, centimeter, and decimeter.</p> <p>12-3 Relate Metric Units of Capacity—pp. 386–387 Objective(s): To relate and choose appropriate metric units of capacity; to rename and compare metric units of capacity.</p> <p>12-4 Relate Metric Units of Mass—pp. 388–389 Objective(s): To relate and choose appropriate metric units of mass; to rename and compare metric units of mass</p> <p>Symbols/Measures: Table of Measures—p. 515</p>
<p>(8) Geometry and measurement. The student applies mathematical process standards to identify locations on a coordinate plane. The student is expected to:</p> <p>(A) describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the x-coordinate, the first number in an ordered pair, indicates movement parallel to the x-axis starting at the origin; and the y-coordinate, the second number, indicates movement parallel to the y-axis starting at the origin;</p>	<p>14-13 The Coordinate Plane—pp. 464–465 Objective(s): To locate and graph points on a coordinate grid.</p> <p>*14-13A Using Coordinate Graphs—Online Objective(s): To use the coordinate plane to solve real-world problems.</p>

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(B) describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane; and	*14-13A Using Coordinate Graphs—Online Objective(s): To use the coordinate plane to solve real-world problems
(C) apply knowledge of right angles to identify acute, right, and obtuse triangles; and	10-5 Triangles (acute, right, obtuse)—pp. 332–333 Objective(s): To classify triangles; to understand that the sum of the angles of a triangle is 180°.
(C) graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table.	14-15 Functions and Coordinate Graphs—pp. 468–469 Objective(s): To use a rule or equation to make a function table; to graph a function on a coordinate grid.
(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 categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots;	Skills Update: Make Bar Graphs—p. 19 Ch. 7 Enrichment: Double Line and Double Bar Graphs—p. 263
(B) represent discrete paired data on a scatterplot; and	*Scatterplots introduced at Grade 6: 9-11 Double Bar Graphs: Critical Thinking (scatterplots)
(C) solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot.	Skills Update: Make Bar Graphs—p. 19 Ch. 7 Enrichment: Double Line and Double Bar Graphs—p. 263 *See also Grade 6: 9-6A Statistical Characteristics of a Data Set; 9-8 Stem-and-Leaf Plots, and 9-11 Double Bar Graphs: Critical Thinking (scatterplots)
(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) define income tax, payroll tax, sales tax, and property tax;	n/a
(B) explain the difference between gross income and net income;	n/a
(C) identify the advantages and disadvantages of different methods of payment, including check, credit card, debit card, and electronic payments;	n/a
(D) develop a system for keeping and using financial records;	n/a
(E) describe actions that might be taken to balance a budget when expenses exceed income; and	n/a
(F) balance a simple budget.	n/a