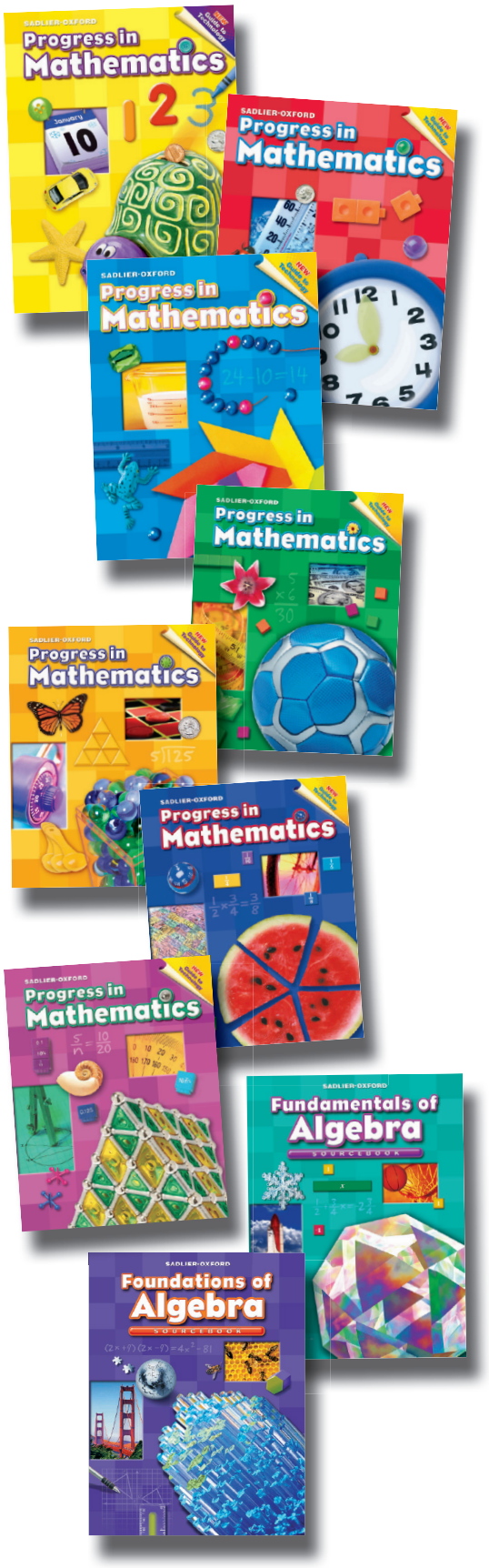

SADLIER PROGRESS IN MATHEMATICS

Fundamentals of Algebra

Aligned to the Chapter 111.

Texas Essential Knowledge and Skills for Mathematics

Subchapter B. Middle School, §111.27, Grade 7, Adopted 2012.

Grade 7

(b) Knowledge and skills

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(b) Knowledge and skills

Grade 7 Texas Essential Knowledge and Skills for Mathematics		Sadlier *Fundamentals of Algebra*, Grade 7
(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;	In every lesson, students have the opportunity to apply problem-solving skills to everyday situations and challenges.
(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;	Students become confident problem solvers as they learn and apply ten key strategies taught and reviewed in the special Problem Solving Strategy lesson found at the end of each chapter. In addition, students apply individual strategies within the context of the real-world introduction to many regular lessons (identified by the round, purple problem solving strategy logo and accompanying activity in the Teacher's Edition). **Problem Solving Strategies** **Account for All Possibilities**—SB pp. 296-297; PB 331-332, 354, 373-374, 375-376, 385-386, 387-388 **Adopt a Different Point of View**—SB pp. 266-267; PB 297-298, 356, 370 **Consider Extreme Cases**—SB pp. 376-377; PB pp. 423-424 **Find a Pattern**—SB pp. 66-67, 102-103; PB pp. 73-74, 370. 399-400, 401-402, 403-404 **Guess and Test**—SB pp. 24-25; PB pp. 23-24 **Make a Drawing**—SB pp. 142-143, 304-305, 325-326, 402; PB pp. 157-158, 343-344, 347, 349, 359, 369, 416, 419-420, 421, 436, 453 **Organize Data**—SB pp. 48-49, 103, 349-350; PB pp. 51-52, 373-374, 376, 384, 385-386, 387-388, 414 **Reason Logically**—SB pp. 202-203; PB pp. 225-226, 362, 373-374, 377-378, 382, 383-384, 434 **Review of Strategies**—SB pp. 102-103, 234-235, 346-347, 400-403; PB pp. 113-114. 261-262, 389-390, 453-454 **Solve a Simpler Problem**—SB pp. 168-169; PB pp. 187-188 **Work Backward**—SB pp. 324-325; PB pp. 363-364
(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;	*Fundamentals of Algebra* lessons feature a wide range of learning tools, models, and techniques. **Manipulatives** algebra tiles—pp. 74-75, 128-129, 130-131, 132-133, 134-135, 136; PB 81-82, 143-144, 145, 149-150

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GRADE 7 TEXAS ESSENTIAL KNOWLEDGE AND SKILLS FOR MATHEMATICS

SADLIER *FUNDAMENTALS OF ALGEBRA*, GRADE 7

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Grade 7 Texas Essential Knowledge and Skills for Mathematics		Sadlier *Fundamentals of Algebra*, Grade 7
		computer geometry software (transformations) —p. 287 spreadsheet—pp. 227, 335
(D)	communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;	Students are given several opportunities in daily lessons to respond to the presentation of new concepts by the teacher, thereby building communication skills through discussion, questioning, reading, and writing. The "English Language Learner" section at the beginning of each chapter and each lesson in the Teacher's Edition features special strategies for building oral language, vocabulary, and reading and writing skills. New math vocabulary and terminology are highlighted in yellow and defined in context in the Student Text (also included in the Glossary). In addition, a Vocabulary Development activity is included at the end of every chapter in the Practice Book. The "Discuss and Write" activity for each lesson in the SourceBook helps anchor the newly learned concept. "Tell About It" is the concluding section of each chapter test, and "Write About It" appears at the end of many lessons in the Practice Book. And the "Math Journal" activities in the TE and SourceBook encourage students to take notes, prepare tables, and make drawings to help them understand, describe, and differentiate between math concepts and processes. **Communication** **Discuss and Write**—SB pp. 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 31, 33, 35, 37, 39,41,43,45,47, 49, 51, 55, 57, 59, 61, 63, 65, 67, 68, 73,75,77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 104, 109, 111, 113, 115,117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 144, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 170, 175, 177, 179, 181, 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 204, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 331, 333, 335, 337, 339, 341, 343, 345, 347, 348, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405 **Tell About It**—PB pp. 30, 32, 58, 60, 80, 82, 120, 122, 164, 166, 194, 196, 232, 234, 268, 270, 304, 306, 338, 340, 370, 372, 396, 398, 430, 432, 460, 462 **Write About It**—PB pp. 2, 6, 18, 42, 64, 86, 90, 130, 136, 138, 142, 148, 174, 182, 189, 200, 202, 216, 222, 224, 236, 264, 280, 358, 362, 376, 412, 416, 422, 426, 434, 452

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GRADE 7 TEXAS ESSENTIAL KNOWLEDGE AND SKILLS FOR MATHEMATICS		SADLIER *FUNDAMENTALS OF ALGEBRA*, GRADE 7
(E)	create and use representations to organize, record, and communicate mathematical ideas;	Early on in the *Fundamentals of Algebra* lesson sequence, students review how to translate the numerical data of real-world challenges into abstract mathematical representations they can process using equations and inequalities to generate useful solutions. Chapter 2 Expressions and Equations—pp. TE pp. 29–51B / SB pp. 29–51 / PB pp. 33–54 Chapter 3 Inequalities—pp. TE pp. 53–51B / SB pp. 53–51 / PB pp. 61–75 In Chapter 8, students study collecting data, recording it, and organizing it using graphical representations. In chapters 8 and 12, they focus on analyzing and interpreting data to make predictions and draw conclusions that can solve problems. Chapter 8 Data Analysis and Statistics—pp. TE pp. 207–237B / SB pp. 207–237 / PB pp. 235–264 Chapter 12 Probability—pp. TE pp. 329–348 / SB pp. 329–348 / PB pp. 373–391 Other chapters that emphasize using representations to communicate mathematical ideas include • Chapter 6 Ratio and Proportion • Chapter 7 Percent and Consumer Applications • Chapter 10 Two-Dimensional Geometry and Measurement Applications • Chapter 13 Patterns, Relations, and Functions.
(F)	analyze mathematical relationships to connect and communicate mathematical ideas; and	The Professional Development page at the beginning of each chapter in the Teacher's Edition describes the connection between previously studied material and the new concepts that will be presented in the chapter. It includes Prerequisite Skills and Math Background. The expanded margin in the TE version of the first page of each chapter features a chapter overview. It connects skills that will be taught in the chapter with the personal lives of students. The first page of each chapter in the SourceBook features a preview of skills students will learn. To ensure they are prepared to be successful learning the new topics, students review the Do You Remember? list of prerequisite skills they have studied previously. **Do You Remember?**—SB pp. 1, 29, 53, 71,107, 147, 173, 207, 239, 271, 301, 329, 351, 381 Part 4 of the daily lesson plan in the TE—Summarize/Assess—is subtitled "Conceptual Thinking." For this activity, students are asked to participate in a discussion of how mathematical ideas are interconnected. For example, the Conceptual Thinking activity on TE page 177B has students "explain how fractions, decimals, and percents are related."

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GRADE 7 TEXAS ESSENTIAL KNOWLEDGE AND SKILLS FOR MATHEMATICS	SADLIER *FUNDAMENTALS OF ALGEBRA*, GRADE 7
(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	Activities that develop mathematical reasoning are featured throughout the program. Students focus on distinguishing between correct and incorrect solutions. **Justify/Verify Answers** Logic/Logical Reasoning—SB pp. 202-203, 346-347; PB pp. 225-226, 351, 370, 358, 389-390, 434 Reasonableness of Solution—SB pp. 37, 39, 80-81, 84-85, 86, 97, 105, 120, 124-125, 205, 271, 300; PB pp. 42, 91, 93, 95, 245, 308, 380, 381 Validity of Results—SB pp. 9, 16-17, 22-23, 24-25, 36-37, 40-41, 42-43 , 45, 46-47, 49, 60-61, 62-63, 64-65, 66-67, 69-70, 80-81, 84-85, 86-87, 91, 92-93, 94-95. 96-97, 98-99, 103, 105-106, 111-112, 124, 132, 134-135, 136-137, 138, 145-146 , 153, 154-55, 159, 168-169, 171-172, 174, 176, 180, 182, 184, 202-203, 235, 266-267, 274, 297, 300, 303, 324-325, 328, 347, 364, 376-377, 380, 395, 396-397, 398-399, 400-401, 403, 406; PB pp. 23-24, 39-40, 41-42, 43-44 , 45-46 , 49-50, 51-52, 67-68, 69-70, 71-72, 73-74, 77-78, 91-92, 95-96, 97-98, 103-104, 105-106, 107-108, 109-110, 131-132, 147-148,151-152, 153-154, 161-162,173-174, 175-176, 187-188, 191-192, 225-226, 229-230, 297-298, 311-312, 348. 363-364, 367, 372, 389-390, 392-393, 423-424, 427, 447-448, 449-450, 451-452, 457
(2) Number and operations. The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers.	VI. Add and Subtract Whole Numbers and Decimals—SB p. 409 VII. Multiplication Patterns—SB p. 410 VIII. Division Patterns—SB p. 410 IX. Estimate Products—SB p. 411 X. Estimate Quotients—SB p. 411 XI. Multiply Whole Numbers—SB p. 411 XII. Divide Whole Numbers–SB p. 412 XIII. Multiply Decimals–SB p. 412 XIV. Divide Decimals—SB p. 413 XV. Fractions Greater Than or Equal to 1—SB p. 413 XVI. Add and Subtract Fractions—SB p. 414 XVII. Multiply Fractions—SB p. 414 XVIII. Divide Fractions—SB p. 415 **Chapter 1 Integers**—TE pp. 1–28; SB pp. 1–28 / PB pp. 1–28 **Chapter 2 Expressions and Equations**—TE pp. 29–52; SB pp. 30–52 / PB pp. 33–55 **Chapter 3 Inequalities**—TE pp. 54–70; SB pp. 54–70 / PB pp. 61–78 **Chapter 4 Rational Numbers: Decimals**— TE pp. 71–106; SB pp. 71–106 / PB pp. 83–118 **Chapter 5 Rational Numbers: Fractions**—TE pp. 107–146; SB pp. 107–146 / PB pp. 123–162
(3) Number and operations. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student is expected to:	
(A) add, subtract, multiply, and divide rational numbers fluently; and	V. Estimate Sums and Differences—SB p. 409 VI. Add and Subtract Whole Numbers and Decimals—SB p. 409

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Grade 7 Texas Essential Knowledge and Skills for Mathematics	Sadlier *Fundamentals of Algebra*, Grade 7
	VII. Multiplication Patterns—SB p. 410 VIII. Division Patterns—SB p. 410 IX. Estimate Products—SB p. 411 X. Estimate Quotients—SB p. 411 XI. Multiply Whole Numbers—SB p. 411 XII. Divide Whole Numbers–SB p. 412 XIII. Multiply Decimals–SB p. 412 XIV. Divide Decimals—SB p. 413 XVI. Add and Subtract Fractions—SB p. 414 XVII. Multiply Fractions—SB p. 414 XVIII. Divide Fractions—SB p. 415 1-3 Add Integers—TE pp. 6–7B; SB pp. 6–7 / PB pp. 5–6 Objective(s): To model addition of integers; to add integers with like signs; to add integers with unlike signs; to add more than two integers. 1-4 Subtract Integers—TE pp. 8–9B; SB pp. 8–9 / PB pp. 7–8 Objective(s): To model subtraction of integers; to subtract integers with like signs; to subtract integers with unlike signs. 1-5 Multiply Integers—TE pp. 9–10B; SB pp. 10–11 / PB pp. 9–10 Objective(s): To multiply integers with models; to multiply integers without models. 1-6 Divide Integers—TE pp. 12–13B; SB pp. 12–13 / PB pp. 11–12 Objective(s): To divide integers with models; to divide integers without models. 4-4 Estimate Decimal Sums and Differences—TE pp. 78–79B; SB pp. 78–79 / PB pp. 89–90 Objective(s): To estimate differences using rounding estimation; to estimate decimal sums using rounding estimation; to estimate decimal sums using front-end estimation; to estimate differences using front-end estimation; to estimate decimal sums using clustering estimation; to estimate differences using clustering estimation. 4-5 Add and Subtract Decimals—TE pp. 80–81B; SB pp. 80–81 / PB pp. 91–92 Objective(s): To add positive and negative decimals; to subtract positive and negative decimals; to add more than two addends. 4-6 Multiply Decimals—TE pp. 82–83B; SB pp. 82–83 / PB pp. 93–94 Objective(s): To multiply positive and negative decimals; to multiply more than two decimal factors. 4-7 Estimate Decimal Products and Quotients—TE pp. 84–85B; SB pp. 84–85 / PB pp. 95–96 Objective(s): To estimate decimal products by using rounding estimation; to estimate quotients by using rounding estimation; to estimate decimal products by using compatible numbers; to estimate quotients by using compatible numbers; to estimate decimal products by using powers of 10; to estimate quotients by using powers of 10. 4-8 Divide Decimals—TE pp. 86–87B; SB pp. 86–87 / PB pp. 97–98 Objective(s): To divide positive and negative decimals; to evaluate division expressions containing decimals. 4-12 Addition and Subtraction Equations with Decimals—TE pp. 94–95B; SB pp. 94–95 / PB pp. 105–106 Objective(s): To apply the Subtraction Property of Equality to solve addition equations with decimals; to apply the Addition Property of Equality to solve subtraction equations with decimals.

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Grade 7 Texas Essential Knowledge and Skills for Mathematics		Sadlier *Fundamentals of Algebra*, Grade 7
		4-13 Multiplication and Division Equations with Decimals—TE pp. 96–97B; SB pp. 96–97 / PB pp. 107–108 Objective(s): To apply the Division Property of Equality to solve multiplication equations with decimals; to apply the Multiplication Property of Equality to solve division equations with decimals. 5-6 Add and Subtract Fractions—TE pp. 118–119B; SB pp. 118–119 / PB pp. 133–134 Objective(s): To add and subtract positive and negative fractions. 5-7 Add and Subtract Mixed Numbers—TE pp. 120–121B; SB pp. 120–121 / PB pp. 135–136 Objective(s): To add and subtract positive and negative mixed numbers. 5-8 Multiply Fractions—TE pp. 122–123B; SB pp. 122–123 / PB pp. 137–138 Objective(s): To multiply positive and negative fractions; to multiply positive and negative fractions and integers; to evaluate algebraic expressions involving multiplication of fractions and mixed numbers. 5-9 Multiply Mixed Numbers—TE pp. 124–125B; SB pp. 124–125 / PB pp. 139–140 Objective(s): To estimate the product of mixed numbers; to multiply positive and negative mixed numbers; to evaluate algebraic expressions involving multiplication of fractions and mixed numbers. 5-10 Divide Fractions—TE pp. 126–127B; SB pp. 126–127 / PB pp. 141–142 Objective(s): To divide positive and negative fractions; to divide positive and negative fractions in complex fraction form. 5-11 Divide Mixed Numbers—TE pp. 128–129B; SB pp. 128–129 / PB pp. 143–144 Objective(s): To divide positive and negative mixed numbers; to evaluate algebraic expressions involving division of fractions and mixed numbers; to simplify complex fractions containing mixed numbers.
(B)	apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.	V. Estimate Sums and Differences—SB p. 409 VI. Add and Subtract Whole Numbers and Decimals—SB p. 409 VII. Multiplication Patterns—SB p. 410 VIII. Division Patterns—SB p. 410 IX. Estimate Products—SB p. 411 X. Estimate Quotients—SB p. 411 XI. Multiply Whole Numbers—SB p. 411 XII. Divide Whole Numbers–SB p. 412 XIII. Multiply Decimals–SB p. 412 XIV. Divide Decimals—SB p. 413 XVI. Add and Subtract Fractions—SB p. 414 XVII. Multiply Fractions—SB p. 414 XVIII. Divide Fractions—SB p. 415 1-3 Add Integers—TE pp. 6–7B; SB pp. 6–7 / PB pp. 5–6 Objective(s): To model addition of integers; to add integers with like signs; to add integers with unlike signs; to add more than two integers. 1-4 Subtract Integers—TE pp. 8–9B; SB pp. 8–9 / PB pp. 7–8 Objective(s): To model subtraction of integers; to subtract integers with like signs; to subtract integers with unlike signs.

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Grade 7 Texas Essential Knowledge and Skills for Mathematics	Sadlier *Fundamentals of Algebra*, Grade 7

1-5 Multiply Integers—TE pp. 9–10B; SB pp. 10–11 / PB pp. 9–10
Objective(s): To multiply integers with models; to multiply integers without models.

1-6 Divide Integers—TE pp. 12–13B; SB pp. 12–13 / PB pp. 11–12
Objective(s): To divide integers with models; to divide integers without models.

4-4 Estimate Decimal Sums and Differences—TE pp. 78–79B; SB pp. 78–79 / PB pp. 89–90
Objective(s): To estimate differences using rounding estimation; to estimate decimal sums using rounding estimation; to estimate decimal sums using front-end estimation; to estimate differences using front-end estimation; to estimate decimal sums using clustering estimation; to estimate differences using clustering estimation.

4-5 Add and Subtract Decimals—TE pp. 80–81B; SB pp. 80–81 / PB pp. 91–92
Objective(s): To add positive and negative decimals; to subtract positive and negative decimals; to add more than two addends.

4-6 Multiply Decimals—TE pp. 82–83B; SB pp. 82–83 / PB pp. 93–94
Objective(s): To multiply positive and negative decimals; to multiply more than two decimal factors.

4-7 Estimate Decimal Products and Quotients—TE pp. 84–85B; SB pp. 84–85 / PB pp. 95–96
Objective(s): To estimate decimal products by using rounding estimation; to estimate quotients by using rounding estimation; to estimate decimal products by using compatible numbers; to estimate quotients by using compatible numbers; to estimate decimal products by using powers of 10; to estimate quotients by using powers of 10.

4-8 Divide Decimals—TE pp. 86–87B; SB pp. 86–87 / PB pp. 97–98
Objective(s): To divide positive and negative decimals; to evaluate division expressions containing decimals.

4-12 Addition and Subtraction Equations with Decimals—TE pp. 94–95B; SB pp. 94–95 / PB pp. 105–106
Objective(s): To apply the Subtraction Property of Equality to solve addition equations with decimals; to apply the Addition Property of Equality to solve subtraction equations with decimals.

4-13 Multiplication and Division Equations with Decimals—TE pp. 96–97B; SB pp. 96–97 / PB pp. 107–108
Objective(s): To apply the Division Property of Equality to solve multiplication equations with decimals; to apply the Multiplication Property of Equality to solve division equations with decimals.

5-6 Add and Subtract Fractions—TE pp. 118–119B; SB pp. 118–119 / PB pp. 133–134
Objective(s): To add and subtract positive and negative fractions.

5-7 Add and Subtract Mixed Numbers—TE pp. 120–121B; SB pp. 120–121 / PB pp. 135–136
Objective(s): To add and subtract positive and negative mixed numbers.

5-8 Multiply Fractions—TE pp. 122–123B; SB pp. 122–123 / PB pp. 137–138
Objective(s): To multiply positive and negative fractions; to multiply positive and negative fractions and integers; to evaluate algebraic expressions involving multiplication of fractions and mixed numbers.

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Grade 7 Texas Essential Knowledge and Skills for Mathematics	Sadlier *Fundamentals of Algebra*, Grade 7
	5-9 Multiply Mixed Numbers—TE pp. 124–125B; SB pp. 124–125 / PB pp. 139–140 Objective(s): To estimate the product of mixed numbers; to multiply positive and negative mixed numbers; to evaluate algebraic expressions involving multiplication of fractions and mixed numbers 5-10 Divide Fractions—TE pp. 126–127B; SB pp. 126–127 / PB pp. 141–142 Objective(s): To divide positive and negative fractions; to divide positive and negative fractions in complex fraction form. 5-11 Divide Mixed Numbers—TE pp. 128–129B; SB pp. 128–129 / PB pp. 143–144 Objective(s): To divide positive and negative mixed numbers; to evaluate algebraic expressions involving division of fractions and mixed numbers; to simplify complex fractions containing mixed numbers.
(4) Proportionality. The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:	
(A) represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including $d = rt$;	6-2 Unit Rate and Unit Cost—TE pp. 150–151B; SB pp. 150–151 / PB pp. 169–170 Objective(s): To write rates; to find unit rates; to use unit cost to determine the better or best buy; to compare rates. 6-3 Write and Solve Proportions—TE pp. 152–153B; SB pp. 152–153 / PB pp. 171–172 Objective(s): To write proportions; to use the cross-products rule to determine whether ratios form a proportion; to find the missing term in a proportion. 6-4 Direct Proportion—TE pp. 154–155B; SB pp. 154–155 / PB pp. 173–174 Objective(s): To apply the concept of direction proportions. *6-3A Use Unit Rates—Online Objective(s): To compute unit rates associated with ratios of fractions; to compute unit rates measured in like or different units; to use models to compute unit rates. 6-5 Proportion by Parts—TE pp. 156–157B; SB pp. 156–157 / PB pp. 175–176 Objective(s): To model solutions of proportions; to solve proportions using part-to whole ratios. 6-6 Scale Drawings and Models—TE pp. 158–159B; SB pp. 158–159 / PB pp. 177–178 Objective(s): To use proportions to solve scale-drawing problems; to use proportions to solve scale-model problems; to use a map scale; to use a scale factor to make a scale model. *6-6A Identify Unit Rate ($d = rt$)—Online Objective(s): To identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. *6-6B Proportional Relationships and Equations—Online Objective(s): To represent proportional relationships by equations; to interpret the situational meaning of point on the graph of a proportional relationship.

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Grade 7 Texas Essential Knowledge and Skills for Mathematics		Sadlier *Fundamentals of Algebra*, Grade 7
		*6-6C Use Proportional Relationships and Equations to Solve Problems—Online Objective(s): To solve problems by representing proportional relationships by equations; to interpret the situational meaning of point on the graph of a proportional relationship. 6-9 Inverse Proportion—TE pp. 164–165B; SB pp. 164–165 / PB pp. 183–184 Objective(s): To solve inverse proportions. 13-6 Graph Linear Functions—TE pp. 362–363B; SB pp. 362–363 / PB pp. 409–410 Objective(s): To graph the solutions of a linear function; to identify a solution to a linear function from its graph; to use a graphing calculator to graph linear functions. [There's a lesson or two on functions, add those too? 13-4 and 13-5.] 13-7 Slope—TE pp. 364–365B; SB pp. 364–365 / PB pp. 411–412 Objective(s): To find the slope of a line; to identify the four kinds of slope. *13-8A Identify Constant of Proportionality—Online Objective(s): To identify the constant of proportionality (unit rate) in real-world (quadrant I) graphs; to relate unit rate and steepness and understand what
(B)	calculate unit rates from rates in mathematical and real-world problems;	6-2 Unit Rate and Unit Cost—TE pp. 150–151B; SB pp. 150–151 / PB pp. 169–170 Objective(s): To write rates; to find unit rates; to use unit cost to determine the better or best buy; to compare rates. 6-3 Write and Solve Proportions—TE pp. 152–153B; SB pp. 152–153 / PB pp. 171–172 Objective(s): To write proportions; to use the cross-products rule to determine whether ratios form a proportion; to find the missing term in a proportion. *6-3A Use Unit Rates—Online Objective(s): To compute unit rates associated with ratios of fractions; to compute unit rates measured in like or different units; to use models to compute unit rates. 6-4 Direct Proportion—TE pp. 154–155B; SB pp. 154–155 / PB pp. 173–174 Objective(s): To apply the concept of direction proportions. 6-5 Proportion by Parts—TE pp. 156–157B; SB pp. 156–157 / PB pp. 175–176 Objective(s): To model solutions of proportions; to solve proportions using part-to whole ratios. 6-6 Scale Drawings and Models—TE pp. 158–159B; SB pp. 158–159 / PB pp. 177–178 Objective(s): To use proportions to solve scale-drawing problems; to use proportions to solve scale-model problems; to use a map scale; to use a scale factor to make a scale model. *6-6A Identify Unit Rate—Online Objective(s): To identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. *6-6B Proportional Relationships and Equations—Online Objective(s): To represent proportional relationships by equations; to interpret the situational meaning of point on the graph of a proportional relationship.

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Grade 7 Texas Essential Knowledge and Skills for Mathematics		Sadlier *Fundamentals of Algebra*, Grade 7
		*6-6C Use Proportional Relationships and Equations to Solve Problems—Online Objective(s): To solve problems by representing proportional relationships by equations; to interpret the situational meaning of point on the graph of a proportional relationship. 6-9 Inverse Proportion—TE pp. 164–165B; SB pp. 164–165 / PB pp. 183–184 Objective(s): To solve inverse proportions. 6-10 Dimensional Analysis—TE pp. 166–167B; SB pp. 166–167 / PB pp. 185–186 Objective(s): To apply dimensional analysis; to use unit ratios to convert currency, time, and Customary Units of length, capacity, and weight. *13-8A Identify Constant of Proportionality—Online Objective(s): To identify the constant of proportionality (unit rate) in real-world (quadrant I) graphs; to relate unit rate and steepness and understand what unit rate means in relation to its visual appearance in a graph.
(C)	determine the constant of proportionality ($k = y/x$) within mathematical and real-world problems;	*6-6A Identify Unit Rate—Online Objective(s): To identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. *13-8A Identify Constant of Proportionality—Online Objective(s): To identify the constant of proportionality (unit rate) in real-world (quadrant I) graphs; to relate unit rate and steepness and understand what unit rate means in relation to its visual appearance in a graph. *13-8B Graph Proportional Relationships—Online Objective(s): To represent proportional relationships by equations and graphs on the coordinate plane in all four quadrants; to interpret the situational meaning of point on the graph of a proportional relationship.
(D)	solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems; and	**Chapter 6 Ratio and Proportion**—TE pp. 148–172; SB pp. 148–172 / PB pp. 167–192 *6-3A Use Unit Rates—Online Objective(s): To compute unit rates associated with ratios of fractions; to compute unit rates measured in like or different units; to use models to compute unit rates. *6-3B Use Rational Numbers to Solve Problems—Online Objective(s): To test proportionality by using table of equivalent ratios or checking that a graph of the relationship is a straight line going through the origin. *6-6A Identify Unit Rate—Online Objective(s): To identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. *6-6B Proportional Relationships and Equations—Online Objective(s): To represent proportional relationships by equations; to interpret the situational meaning of point on the graph of a proportional relationship. *6-6C Use Proportional Relationships and Equations to Solve Problems—Online Objective(s): To solve problems by representing proportional relationships by equations; to interpret the situational meaning of point on the graph of a proportional relationship. **Chapter 7 Percent and Consumer Applications**—TE pp. 174–206; SB pp. 174–206 / PB pp. 197–230

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Grade 7 Texas Essential Knowledge and Skills for Mathematics			Sadlier *Fundamentals of Algebra*, Grade 7
			*7-9A Percent Error—Online Objective(s): To use proportional relationships to solve multistep percent problems involving percent error. *7-11A Equivalent Expressions for Percents—Online Objective(s): To write an expression involving percent in an equivalent form; to interpret the meanings of equivalent forms of expressions involving percents.
	(E)	convert between measurement systems, including the use of proportions and the use of unit rates.	4-15 Rename Metric Units of Measure—TE pp. 100–101B; SB pp. 100–101 / PB pp. 111–112 Objective(s): To rename metric units of length; to rename metric units of mass; to rename metric units of capacity. 6-2 Unit Rate and Unit Cost (gallons to quarts)—TE pp. 150–151B; SB pp. 150–151 / PB pp. 169–170 Objective(s): To write rates; to find unit rates; to use unit cost to determine the better or best buy; to compare rates. 6-10 Dimensional Analysis—TE pp. 166–167B; SB pp. 166–167 / PB pp. 185–186 Objective(s): To apply dimensional analysis; to use unit ratios to convert currency, time, and Customary Units of length, capacity, and weight. Tables: Measurement Conversions—SB p. 439
(5)	Proportionality. The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships. The student is expected to:		
	(A)	generalize the critical attributes of similarity, including ratios within and between similar shapes;	6-7 Similarity—TE pp. 160–161B; SB pp. 160–161 / PB pp. 179–180 Objective(s): To determine similarity; to name corresponding parts of similar figures; to use proportions to find missing dimensions. 6-8 Indirect Measurement—TE pp. 162–163B; SB pp. 162–163 / PB pp. 181–182 Objective(s): To solve problems involving indirect measurement by using similar right triangles. Ch. 11 Enrichment: Three-Dimensional Figures and the Ratio of Similarity—TE pp. 326–327B; SB pp. 326–327 / PB pp. 365–366
	(B)	describe π as the ratio of the circumference of a circle to its diameter; and	10-8 Circumference and Area of a Circle—TE pp. 286–287B; SB pp. 286–287 / PB pp. 321–322 Objective(s): To use a formula to find the circumference of a circle; to use a formula to find the area of a circle; to find the radius of a circle given its circumference; to find the radius of a circle given its area; to find the diameter of a circle given its circumference; to find the diameter of a circle given its area. 10-9 Area of Complex Figures—TE pp. 288–289B; SB pp. 288–289 / PB pp. 323–324 Objective(s): To identify polygons within a complex figure; to identify circles within a complex figure; to find or estimate the area of complex figures involving polygons and circles; to find missing dimensions in a complex figure given its area.
	(C)	solve mathematical and real-world problems involving similar shape and scale drawings.	6-6 Scale Drawings and Models—TE pp. 158–159B; SB pp. 158–159 / PB pp. 177–178 Objective(s): To use proportions to solve scale-drawing problems; to use proportions to solve scale-model problems; to use a map scale; to use a scale factor to make a scale model.

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Grade 7 Texas Essential Knowledge and Skills for Mathematics			Sadlier *Fundamentals of Algebra*, Grade 7
			6-7 Similarity—TE pp. 160–161B; SB pp. 160–161 / PB pp. 179–180 Objective(s): To determine similarity; to name corresponding parts of similar figures; to use proportions to find missing dimensions. 6-8 Indirect Measurement—TE pp. 162–163B; SB pp. 162–163 / PB pp. 181–182 Objective(s): To solve problems involving indirect measurement by using similar right triangles. Ch. 6 Test Prep: Extended-Response Questions, Strategy: Organize Information (similarity)—TE p. 171 / SB p. 171 / PB p. 191 Ch. 11 Enrichment: Three-Dimensional Figures and the Ratio of Similarity—TE pp. 326–327B; SB pp. 326–327 / PB pp. 365–366 13-12 Graph Dilations (similarity)—TE pp. 374–375B; SB pp. 374–375 / PB pp. 421–422 Objective(s): To identify graphs of dilations of figures; to graph dilations of polygons on the coordinate plane; to compute length on the coordinate plane; to compute area on the coordinate plane.
(6)	Proportionality. The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships. The student is expected to:		
	(A)	represent sample spaces for simple and compound events using lists and tree diagrams;	12-1 Sample Space—TE pp. 330–331B; SB pp. 330–331 / PB pp. 373–374 Objective(s): To determine the sample space of an experiment; to determine the likelihood of an event; to use a tree diagram to find the sample space for two events; to use a tree diagram to determine the likelihood of an event. 12-2 Fundamental Counting Principle and Factorials—TE pp. 332–333B; SB pp. 332–333 / PB pp. 375–376 Objective(s): To use the Fundamental Counting Principal to find the size of a sample space; to use factorials to find the size of a sample space.
	(B)	select and use different simulations to represent simple and compound events with and without technology;	12-4 Experimental Probability—TE pp. 336–337B; SB pp. 336–337 / PB pp. 379–380 Objective(s): To find the experimental probability of an event; to find, record, and predict outcomes of probability experiments; to simulate events to predict probability; to simulate events to predict probability. *12-6A Design a Simulation—Online Objective(s): To design and use a simulation to generate frequencies for compound events.
	(C)	make predictions and determine solutions using experimental data for simple and compound events;	12-4 Experimental Probability—TE pp. 336–337B; SB pp. 336–337 / PB pp. 379–380 Objective(s): To find the experimental probability of an event; to find, record, and predict outcomes of probability experiments; to simulate events to predict probability; to simulate events to predict probability.

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	(D) make predictions and determine solutions using theoretical probability for simple and compound events;	12-3 Theoretical Probability—TE pp. 334–335B; SB pp. 334–335 / PB pp. 377–378 Objective(s): To write probabilities as fractions; to write probabilities as decimals; to write probabilities as percents; to represent probabilities as fractions on a number line from 0 to 1; to represent probabilities as decimals on a number line from 0 to 1; to represent probabilities as percents on a number line from 0 to 1; to define the theoretical probability of an event and use a formula to find theoretical probability; to find the theoretical probability of complementary events.
	(E) find the probabilities of a simple event and its complement and describe the relationship between the two;	12-3 Theoretical Probability—TE pp. 334–335B; SB pp. 334–335 / PB pp. 377–378 Objective(s): To write probabilities as fractions; to write probabilities as decimals; to write probabilities as percents; to represent probabilities as fractions on a number line from 0 to 1; to represent probabilities as decimals on a number line from 0 to 1; to represent probabilities as percents on a number line from 0 to 1; to define the theoretical probability of an event and use a formula to find theoretical probability; to find the theoretical probability of complementary events. 12-4 Experimental Probability—TE pp. 336–337B; SB pp. 336–337 / PB pp. 379–380 Objective(s): To find the experimental probability of an event; to find, record, and predict outcomes of probability experiments; to simulate events to predict probability; to simulate events to predict probability.
	(F) use data from a random sample to make inferences about a population;	8-1 Samples and Surveys—TE pp. 208–209B; SB pp. 208–209 / PB pp. 235–236 Objective(s): To use sampling to conduct a survey; to make and use cumulative frequency tables to organize data; to use a sample to predict data for an entire population. *8-1A Use Samples to Make Predictions—Online Objective(s): To generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions; to compare predictions with observed results.
	(G) solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents;	XIX. Bar Graphs—SB p. 415 8-4 Choose an Appropriate Graph—TE pp. 214–215B; SB pp. 214–215 / PB pp. 241–242 Objective(s): To select and use appropriate types of graphs to display data. 8-5 Multiple Bar Graphs—TE pp. 216–217B; SB pp. 216–217 / PB pp. 243–244 Objective(s): To read and interpret multiple bar graphs. 8-12 Misleading Statistics and Graphs (bar graphs)—TE pp. 230–231B; SB pp. 230–231 / PB pp. 257–258 Objective(s): To recognize the characteristics of a misleading graph; to recognize misleading statistics. 8-13 Technology: Create Graphs—TE pp. 232–233B; SB pp. 232–233 / PB pp. 259–260 Objective(s): To use spreadsheet software to display data in bar graphs, line graphs, or circle graphs. 9-13 Make a Circle Graph—TE pp. 264–265B; SB pp. 264–265 / PB pp. 295–296 Objective(s): To make a circle graph to display a set of data. *No dot plots at this level.

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	(H)	solve problems using qualitative and quantitative predictions and comparisons from simple experiments; and	*8-1A Compare Experimental and Theoretical Probabilities—Online Objective(s): To generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions; to compare predictions with observed results. 12-4 Experimental Probability—TE pp. 336–337B; SB pp. 336–337 / PB pp. 379–380 Objective(s): To find the experimental probability of an event; to find, record, and predict outcomes of probability experiments; to simulate events to predict probability; to simulate events to predict probability.
	(I)	determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces.	12-3 Theoretical Probability—TE pp. 334–335B; SB pp. 334–335 / PB pp. 377–378 Objective(s): To write probabilities as fractions; to write probabilities as decimals; to write probabilities as percents; to represent probabilities as fractions on a number line from 0 to 1; to represent probabilities as decimals on a number line from 0 to 1; to represent probabilites as percents on a number line from 0 to 1; to define the theoretical probability of an event and use a formula to find theoretical probability; to find the theoretical probability of complementary events. 12-4 Experimental Probability—TE pp. 336–337B; SB pp. 336–337 / PB pp. 379–380 Objective(s): To find the experimental probability of an event; to find, record, and predict outcomes of probability experiments; to simulate events to predict probability; to simulate events to predict probability.
(7)		Expressions, equations, and relationships. The student applies mathematical process standards to represent linear relationships using multiple representations. The student is expected to represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form $y = mx + b$.	**Readiness*— 13-7 Slope—TE pp. 364–365B; SB pp. 364–365 / PB pp. 411–412 Objective(s): To find the slope of a line; to identify the four kinds of slope. *Slope-Intercept Form introduced in Gr. 8: 6-6 Linear Functions: Standard Form and Slope-Intercept Form
(8)		Expressions, equations, and relationships. The student applies mathematical process standards to develop geometric relationships with volume. The student is expected to:	
	(A)	model the relationship between the volume of a rectangular prism and a rectangular pyramid having both congruent bases and heights and connect that relationship to the formulas;	11-7 Volume of Prisms—TE pp. 314–315B; SB pp. 314–315 / PB pp. 353–354 Objective(s): To use a formula to find the volume of a rectangular prism; to use a formula to find the volume of a triangular prism; to find an unknown dimension given the volume of a rectangular prism; to find an unknown dimension given the volume of a triangular prism; to rename volume units in equivalent forms. 11-8 Volume of Pyramids—TE pp. 316–317B; SB pp. 316–317 / PB pp. 355–356 Objective(s): To use formulas to find the volumes of pyramids; to find unknown dimensions given the volumes of rectangular pyramids; to find unknown dimensions given the volumes of triangular pyramids. 11-10 Surface Area and Volume of Complex Three-Dimensional Figures—TE pp. 320–321B; SB pp. 320–321 / PB pp. 359–360 Objective(s): To find the volume of complex three-dimensional figures; to use formulas to find the surface area of complex three-dimensional figures; to use formulas to find the volume of complex three-dimensional figures.

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Grade 7 Texas Essential Knowledge and Skills for Mathematics			Sadlier *Fundamentals of Algebra*, Grade 7
			11-11 Changing Dimensions of Three-Dimensional Figures—TE pp. 322–323B; SB pp. 322–323 / PB pp. 361–362 Objective(s): To explore how change of scale relates to change in dimensions; to explore how changes in scale and dimension relate to changes in volume and surface area.
	(B)	explain verbally and symbolically the relationship between the volume of a triangular prism and a triangular pyramid having both congruent bases and heights and connect that relationship to the formulas; and	11-7 Volume of Prisms—TE pp. 314–315B; SB pp. 314–315 / PB pp. 353–354 Objective(s): To use a formula to find the volume of a rectangular prism; to use a formula to find the volume of a triangular prism; to find an unknown dimension given the volume of a rectangular prism; to find an unknown dimension given the volume of a triangular prism; to rename volume units in equivalent forms. 11-8 Volume of Pyramids—TE pp. 316–317B; SB pp. 316–317 / PB pp. 355–356 Objective(s): To use formulas to find the volumes of pyramids; to find unknown dimensions given the volumes of rectangular pyramids; to find unknown dimensions given the volumes of triangular pyramids. 11-10 Surface Area and Volume of Complex Three-Dimensional Figures—TE pp. 320–321B; SB pp. 320–321 / PB pp. 359–360 Objective(s): To draw complex three-dimensional figures; to use nets to find the surface area of complex three-dimensional figures; to use nets to find the volume of complex three-dimensional figures; to use formulas to find the surface area of complex three-dimensional figures; to use formulas to find the volume of complex three-dimensional figures. 11-11 Changing Dimensions of Three-Dimensional Figures—TE pp. 322–323B; SB pp. 322–323 / PB pp. 361–362 Objective(s): To explore how change of scale relates to change in dimensions; to explore how changes in scale and dimension relate to changes in volume and surface area.
	(C)	use models to determine the approximate formulas for the circumference and area of a circle and connect the models to the actual formulas.	10-8 Circumference and Area of a Circle—TE pp. 286–287B; SB pp. 286–287 / PB pp. 321–322 Objective(s): To use a formula to find the circumference of a circle; to use a formula to find the area of a circle; to find the radius of a circle given its circumference; to find the radius of a circle given its area; to find the diameter of a circle given its circumference; to find the diameter of a circle given its area. 10-9 Area of Complex Figures—TE pp. 288–289B; SB pp. 288–289 / PB pp. 323–324 Objective(s): To identify polygons within a complex figure; to identify circles within a complex figure; to find or estimate the area of complex figures involving polygons and circles; to find missing dimensions in a complex figure given its area.
(9)	Expressions, equations, and relationships. The student applies mathematical process standards to solve geometric problems. The student is expected to:		
	(A)	solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids;	11-7 Volume of Prisms—TE pp. 314–315B; SB pp. 314–315 / PB pp. 353–354 Objective(s): To use a formula to find the volume of a rectangular prism; to use a formula to find the volume of a triangular prism; to find an unknown dimension given the volume of a rectangular prism; to find an unknown dimension given the volume of a triangular prism; to rename volume units in equivalent forms.

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Grade 7 Texas Essential Knowledge and Skills for Mathematics		Sadlier *Fundamentals of Algebra*, Grade 7
		11-8 Volume of Pyramids—TE pp. 316–317B; SB pp. 316–317 / PB pp. 355–356 Objective(s): To use formulas to find the volumes of pyramids; to find unknown dimensions given the volumes of rectangular pyramids; to find unknown dimensions given the volumes of triangular pyramids. 11-10 Surface Area and Volume of Complex Three-Dimensional Figures—TE pp. 320–321B; SB pp. 320–321 / PB pp. 359–360 Objective(s): To draw complex three-dimensional figures; to use nets to find the surface area of complex three-dimensional figures; to use nets to find the volume of complex three-dimensional figures; to use formulas to find the surface area of complex three-dimensional figures; to use formulas to find the volume of complex three-dimensional figures. 11-11 Changing Dimensions of Three-Dimensional Figures—TE pp. 322–323B; SB pp. 322–323 / PB pp. 361–362 Objective(s): To explore how change of scale relates to change in dimensions; to explore how changes in scale and dimension relate to changes in volume and surface area.
(B)	determine the circumference and area of circles;	10-8 Circumference and Area of a Circle—TE pp. 286–287B; SB pp. 286–287 / PB pp. 321–322 Objective(s): To use a formula to find the circumference of a circle; to use a formula to find the area of a circle; to find the radius of a circle given its circumference; to find the radius of a circle given its area; to find the diameter of a circle given its circumference; to find the diameter of a circle given its area. 10-9 Area of Complex Figures—TE pp. 288–289B; SB pp. 288–289 / PB pp. 323–324 Objective(s): To identify polygons within a complex figure; to identify circles within a complex figure; to find or estimate the area of complex figures involving polygons and circles; to find missing dimensions in a complex figure given its area. Ch. 10 Test Prep: Multiple-Choice Questions, Strategy: Apply Mathematical Reasoning (circumference)—TE p. 300 / SB p. 300 / PB p. 335
(C)	determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles; and	10-7 Area of Triangles and Trapezoids—TE pp. 284–285B; SB pp. 284–285 / PB pp. 319–320 Objective(s): To use a formula to find the area of a triangle; to use a formula to find the area of a trapezoid; to rename area units in equivalent forms; to find an unknown base given the area of a triangle; to find an unknown base given the area of a trapezoid; to find an unknown height given the area of a triangle; to find an unknown height given the area of a trapezoid. 10-8 Circumference and Area of a Circle—TE pp. 286–287B; SB pp. 286–287 / PB pp. 321–322 Objective(s): To use a formula to find the circumference of a circle; to use a formula to find the area of a circle; to find the radius of a circle given its circumference; to find the radius of a circle given its area; to find the diameter of a circle given its circumference; to find the diameter of a circle given its area. 10-9 Area of Complex Figures—TE pp. 288–289B; SB pp. 288–289 / PB pp. 323–324 Objective(s): To identify polygons within a complex figure; to identify circles within a complex figure; to find or estimate the area of complex figures involving polygons and circles; to find missing dimensions in a complex figure given its area.

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		Ch. 10 Enrichment: Area of Irregular Polygons—TE pp. 298–299B; SB pp. 298–299 / PB pp. 333–334 *No semicircles or quarter circles at this level.
	(D) solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shape's net.	11-3 Surface Area of Prisms—TE pp. 306–307B; SB pp. 306–307 / PB pp. 345–346 Objective(s): To draw nets to find the surface area of prisms; to use nets to find the surface area of prisms; to use formulas to find the surface area of prisms. 11-4 Surface Area of Pyramids—TE pp. 308–309B; SB pp. 308–309 / PB pp. 347–348 Objective(s): To draw nets to find the surface area of a rectangular pyramid or a triangular pyramid; to use nets to find the surface area of a rectangular pyramid or a triangular pyramid; to use formulas to find the surface area of a rectangular pyramid; to use formulas to find the surface area of a triangular pyramid; to rename surface area units in equivalent forms. 11-5 Surface Area of Cylinders and Cones—TE pp. 310–311B; SB pp. 310–311 / PB pp. 349–350 Objective(s): To draw nets to find the surface area of cylinders and cones; to use nets to find the surface area of cylinders and cones; to use formulas to find the surface area of cylinders; to use formulas to find the surface area of cones. 11-6 Estimate Surface Area—TE pp. 312–313B; SB pp. 312–313 / PB pp. 351–352 Objective(s): To estimate the surface area of prisms; to estimate the surface area of cylinders. 11-10 Surface Area and Volume of Complex Three-Dimensional Figures—TE pp. 320–321B; SB pp. 320–321 / PB pp. 359–360 Objective(s): To draw complex three-dimensional figures; to use nets to find the surface area of complex three-dimensional figures; to use nets to find the volume of complex three-dimensional figures; to use formulas to find the surface area of complex three-dimensional figures; to use formulas to find the volume of complex three-dimensional figures.
(10)	Expressions, equations, and relationships. The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. The student is expected to:	
	(A) write one-variable, two-step equations and inequalities to represent constraints or conditions within problems;	2-8 Solve Two–Step Equations—TE pp. 44–45B; SB pp. 44–45 / PB pp. 47–48 Objective(s): To model solving two-step algebraic equations with integers; to solve two-step algebraic equations using the properties of equality. 3-6 Solve Inequalities Using Division (Acceleration: Two-Step Inequalities)—TE p. 65B; SB p. 65 / PB pp. 71–72 Objective(s): To solve one-step inequalities by applying the Division Property of Inequality; to graph the solution set of an inequality. *3-6A Solve Two-Step Inequalities—Online Objective(s): To solve word problems involving inequalities by graphing the solution set of the inequality and interpreting it in the context of the problem.

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		14-8 Solve Multistep Equations—TE pp. 396–397B; SB pp. 396–397 / PB pp. 447–448 Objective(s): To solve multistep linear equations; to solve multistep equations with one variable on both sides of the equation. 4-14 Solve Two-Step Equations with Decimals—TE pp. 98–99B; SB pp. 98–99 / PB pp. 109–110 Objective(s): To solve two-step algebraic equations containing decimals by applying the appropriate properties of equality. 5-16 Solve Two-Step Equations with Fractions—TE pp. 138–139B; SB pp. 138–139 / PB pp. 153–154 Objective(s): To solve two-step algebraic equations with fractions and mixed numbers by applying the appropriate properties of equality and the Inverse Properties of Addition and Multiplication.
(B)	represent solutions for one-variable, two-step equations and inequalities on number lines; and	**Related content—* 2-8 Solve Two–Step Equations—TE pp. 44–45B; SB pp. 44–45 / PB pp. 47–48 Objective(s): To model solving two-step algebraic equations with integers; to solve two-step algebraic equations using the properties of equality. 3-2 Graph Inequalities on a Number Line—TE pp. 56–57B; SB pp. 56–57 / PB pp. 63–64 Objective(s): To use a replacement set to identify the solution set of an inequality; to graph the solution set of an inequality on a number line; to write an inequality that describes a given graph. 3-4 Solve Inequalities Using Addition and Subtraction—TE pp. 60–61B; SB pp. 60–61 / PB pp. 67–68 Objective(s): To solve one-step inequalities by applying the Addition Property of Inequality; to solve one-step inequalities by applying the Subtraction Property of Inequality; to graph the solution set of an inequality 3-5 Solve Inequalities Using Multiplication—TE pp. 62–63B; SB pp. 62–63 / PB pp. 69–70 Objective(s): To solve one-step inequalities by applying the Multiplication Property of Inequality; to graph the solution set of an inequality. 3-6 Solve Inequalities Using Division—TE pp. 64–65B; SB pp. 64–65 / PB pp. 71–72 Objective(s): To solve one-step inequalities by applying the Division Property of Inequality; to graph the solution set of an inequality. *3-6A Solve Two-Step Inequalities—Online Objective(s): To solve word problems involving inequalities by graphing the solution set of the inequality and interpreting it in the context of the problem. 14-8 Solve Multistep Equations—TE pp. 396–397B; SB pp. 396–397 / PB pp. 447–448 Objective(s): To solve multistep linear equations; to solve multistep equations with one variable on both sides of the equation. 4-14 Solve Two-Step Equations with Decimals—TE pp. 98–99B; SB pp. 98–99 / PB pp. 109–110 Objective(s): To solve two-step algebraic equations containing decimals by applying the appropriate properties of equality.

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		5-16 Solve Two-Step Equations with Fractions—TE pp. 138–139B; SB pp. 138–139 / PB pp. 153–154 Objective(s): To solve two-step algebraic equations with fractions and mixed numbers by applying the appropriate properties of equality and the Inverse Properties of Addition and Multiplication.
	(C) write a corresponding real-world problem given a one-variable, two-step equation or inequality.	2-8 Solve Two–Step Equations—TE pp. 44–45B; SB pp. 44–45 / PB pp. 47–48 Objective(s): To model solving two-step algebraic equations with integers; to solve two-step algebraic equations using the properties of equality. 3-6 Solve Inequalities Using Division (Acceleration: Two-Step Inequalities)—TE p. 65B; SB p. 65 / PB pp. 71–72 Objective(s): To solve one-step inequalities by applying the Division Property of Inequality; to graph the solution set of an inequality. *3-6A Solve Two-Step Inequalities—Online Objective(s): To solve word problems involving inequalities by graphing the solution set of the inequality and interpreting it in the context of the problem. 14-8 Solve Multistep Equations—TE pp. 396–397B; SB pp. 396–397 / PB pp. 447–448 Objective(s): To solve multistep linear equations; to solve multistep equations with one variable on both sides of the equation. 4-14 Solve Two-Step Equations with Decimals—TE pp. 98–99B; SB pp. 98–99 / PB pp. 109–110 Objective(s): To solve two-step algebraic equations containing decimals by applying the appropriate properties of equality. 5-16 Solve Two-Step Equations with Fractions—TE pp. 138–139B; SB pp. 138–139 / PB pp. 153–154 Objective(s): To solve two-step algebraic equations with fractions and mixed numbers by applying the appropriate properties of equality and the Inverse Properties of Addition and Multiplication.
(11)	Expressions, equations, and relationships. The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to:	
	(A) model and solve one-variable, two-step equations and inequalities;	2-8 Solve Two–Step Equations—TE pp. 44–45B; SB pp. 44–45 / PB pp. 47–48 Objective(s): To model solving two-step algebraic equations with integers; to solve two-step algebraic equations using the properties of equality. 3-3 Model Properties of Inequality—TE pp. 58–59B; SB pp. 58–59 / PB pp. 65–66 Objective(s): To use algebra tiles and number lines to model properties of inequality. 3-6 Solve Inequalities Using Division (Acceleration: Two-Step Inequalities)—TE p. 65B; SB p. 65 / PB pp. 71–72 Objective(s): To solve one-step inequalities by applying the Division Property of Inequality; to graph the solution set of an inequality.

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		*3-6A Solve Two-Step Inequalities—Online Objective(s): To solve word problems involving inequalities by graphing the solution set of the inequality and interpreting it in the context of the problem. Ch. 3 Test Prep: Short-Answer Questions, Strategy: Show All Your Work (solve inequalities)—TE pp. 69–70 / SB pp. 69–70 / PB pp 77–78 14-8 Solve Multistep Equations—TE pp. 396–397B; SB pp. 396–397 / PB pp. 447–448 Objective(s): To solve multistep linear equations; to solve multistep equations with one variable on both sides of the equation. 4-14 Solve Two-Step Equations with Decimals—TE pp. 98–99B; SB pp. 98–99 / PB pp. 109–110 Objective(s): To solve two-step algebraic equations containing decimals by applying the appropriate properties of equality. 5-16 Solve Two-Step Equations with Fractions—TE pp. 138–139B; SB pp. 138–139 / PB pp. 153–154 Objective(s): To solve two-step algebraic equations with fractions and mixed numbers by applying the appropriate properties of equality and the Inverse Properties of Addition and Multiplication.
(B)	determine if the given value(s) make(s) one-variable, two-step equations and inequalities true; and	2-8 Solve Two–Step Equations—TE pp. 44–45B; SB pp. 44–45 / PB pp. 47–48 Objective(s): To model solving two-step algebraic equations with integers; to solve two-step algebraic equations using the properties of equality. 3-6 Solve Inequalities Using Division (Acceleration: Two-Step Inequalities)—TE p. 65B; SB p. 65 / PB pp. 71–72 Objective(s): To solve one-step inequalities by applying the Division Property of Inequality; to graph the solution set of an inequality. *3-6A Solve Two-Step Inequalities—Online Objective(s): To solve word problems involving inequalities by graphing the solution set of the inequality and interpreting it in the context of the problem. 14-8 Solve Multistep Equations—TE pp. 396–397B; SB pp. 396–397 / PB pp. 447–448 Objective(s): To solve multistep linear equations; to solve multistep equations with one variable on both sides of the equation. 4-14 Solve Two-Step Equations with Decimals—TE pp. 98–99B; SB pp. 98–99 / PB pp. 109–110 Objective(s): To solve two-step algebraic equations containing decimals by applying the appropriate properties of equality. 5-16 Solve Two-Step Equations with Fractions—TE pp. 138–139B; SB pp. 138–139 / PB pp. 153–154 Objective(s): To solve two-step algebraic equations with fractions and mixed numbers by applying the appropriate properties of equality and the Inverse Properties of Addition and Multiplication.
(C)	write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships.	9-3 Angle Pairs—TE pp. 244–245B; SB pp. 244–245 / PB pp. 275–276 Objective(s): To identify complementary angles; to identify supplementary angles; to identify adjacent angles; to identify vertical angles; to find missing angle measures by solving equations.

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	9-4 Parallel Lines and Transversals—TE pp. 246–247B; SB pp. 246–247 / PB pp. 277–278 Objective(s): To identify the kinds of angles formed when a pair of parallel lines is intersected by a transversal; to use the properties of angle pairs and parallel lines to find missing angle measures. 9-5 Congruent Angles and Line Segments—TE pp. 248–249B; SB pp. 248–249 / PB pp. 279–280 Objective(s): To recognize congruent angles; to recognize line segments; to identify line segment bisectors; to identify midpoints; to identify perpendicular bisectors; to identify angle bisectors; to construct the bisector of a given angle; to construct the perpendicular bisector of a given line segment. 9-7 Polygons—TE pp. 252–253B; SB pp. 252–253 / PB pp. 283–284 Objective(s): To find the exterior angles of polygons; to find the interior angles of polygons; to identify regular polygons; to identify convex polygons; to identify concave polygons; to find the sum of angle measures of polygons; to find the missing measure of angles of a polygon. 9-11 Quadrilaterals—TE pp. 260–261B; SB pp. 260–261 / PB pp. 291–292 Objective(s): To identify the properties of quadrilaterals and the relationships among different types of quadrilaterals; to apply the properties of quadrilaterals in finding missing side measures; to apply the properties of quadrilaterals in finding missing angle measures. 9-12 Circles—TE pp. 262–263B; SB pp. 262–263 / PB pp. 293–294 Objective(s): To identify parts of a circle; to name different kinds of arcs; to identify and find the measure of central angles; to identify and find the measure of inscribed angles; to identify secants; to identify tangents; to identify concentric circles; to identify inscribed circles; to identify circumscribed circles. Ch. 9 Test Prep: Multiple-Choice Questions, Strategy: Apply Mathematical Reasoning (write and solve equations)—TE p. 270 / SB p. 270 / PB p. 301
(12) Measurement and data. The student applies mathematical process standards to use statistical representations to analyze data. The student is expected to:	
(A) compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads;	8-8 Box-and-Whisker Plots—TE pp. 222–223B; SB pp. 222–223 / PB pp. 249–250 Objective(s): To make box-and-whisker plots; to read box-and-whisker plots; to determine and interpret clusters; to determine and interpret quartiles; to determine and interpret gaps; to determine and interpret outliers; to compare two box-and-whisker plots using the same number line. *8-8A Variability—Online Objective(s): To compare the variability of two sets of data visually. *8-8C Comparing Data Sets—Online Objective(s): To informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.

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	(B) use data from a random sample to make inferences about a population; and	8-1 Samples and Surveys—TE pp. 208–209B; SB pp. 208–209 / PB pp. 235–236 Objective(s): To use sampling to conduct a survey; to make and use cumulative frequency tables to organize data; to use a sample to predict data for an entire population. *8-1A Compare Experimental and Theoretical Probabilities—Online Objective(s): To generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions; to compare predictions with observed results.
	(C) compare two populations based on data in random samples from these populations, including informal comparative inferences about differences between the two populations.	8-1 Samples and Surveys—TE pp. 208–209B; SB pp. 208–209 / PB pp. 235–236 Objective(s): To use sampling to conduct a survey; to make and use cumulative frequency tables to organize data; to use a sample to predict data for an entire population. *8-1A Compare Experimental and Theoretical Probabilities—Online Objective(s): To generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions; to compare predictions with observed results.
(13)	Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:	
	(A) calculate the sales tax for a given purchase and calculate income tax for earned wages;	7-10 Sales Tax and Tips—TE pp. 192–193B; SB pp. 192–193 / PB pp. 215–216 Objective(s): To calculate sales tax and total cost; to read and use a tax table; to calculate a tip and total cost.
	(B) identify the components of a personal budget, including income; planned savings for college, retirement, and emergencies; taxes; and fixed and variable expenses, and calculate what percentage each category comprises of the total budget;	**Related content*— 7-13 Simple Interest—TE pp. 198–199B; SB pp. 198–199 / PB pp. 221–222 Objective(s): To find simple interest; to find the total amount earned or due; to find the rate of interest; to find the time that principal is left on deposit; to use spreadsheet software to compute simple interest for different principals, rates and lengths of time. 7-14 Compound Interest—TE pp. 200–201B; SB pp. 200–201 / PB pp. 223–224 Objective(s): To compute compound interest using tables. Ch. 8 Enrichment: Financial Spreadsheets—TE pp. 236–237B; SB pp. 236–237 / PB pp. 263–264
	(C) create and organize a financial assets and liabilities record and construct a net worth statement;	n/a
	(D) use a family budget estimator to determine the minimum household budget and average hourly wage needed for a family to meet its basic needs in the student's city or another large city nearby;	n/a

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	(E) calculate and compare simple interest and compound interest earnings; and	7-13 Simple Interest—TE pp. 198–199B; SB pp. 198–199 / PB pp. 221–222 Objective(s): To find simple interest; to find the total amount earned or due; to find the rate of interest; to find the time that principal is left on deposit; to use spreadsheet software to compute simple interest for different principals, rates and lengths of time. 7-14 Compound Interest—TE pp. 200–201B; SB pp. 200–201 / PB pp. 223–224 Objective(s): To compute compound interest using tables.
	(F) analyze and compare monetary incentives, including sales, rebates, and coupons.	7-5 Find a Percent (find the discounted price)—TE pp. 182–183B; SB pp. 182–183 / PB pp. 205–206 Objective(s): To find what percent one number is of another using the percent formula or a percent proportion. 7-11 Discount and Markup—TE pp. 194–195B; SB pp. 194–195 / PB pp. 217–218 Objective(s): To find the amount of discount; to find the sale price; to find the discount rate; to find the amount of markup; to find the markup rate.

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