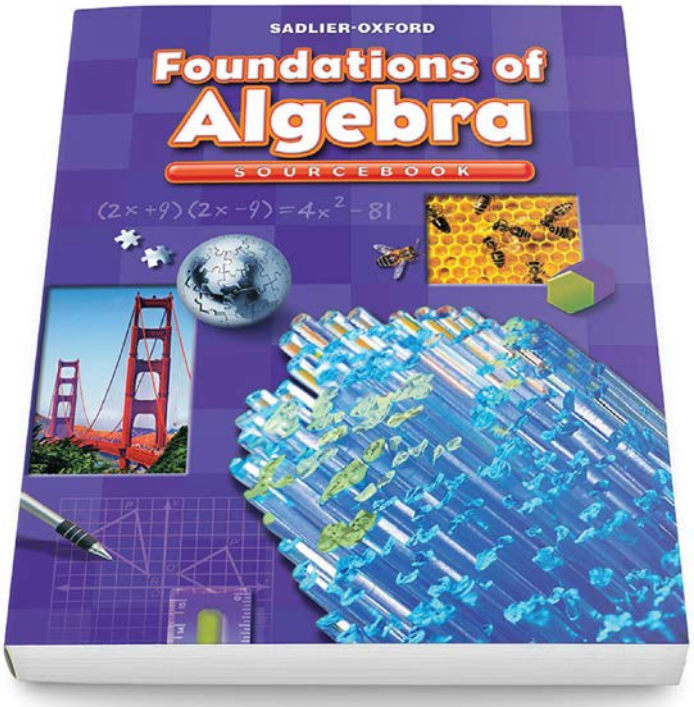
Foundations of Algebra

Correlation to Florida's B.E.S.T. Standards for Mathematics

Grade 8



CONTENTS

Number Sense and Operations

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.NSO.1 Solve problems involving rational numbers, including numbers in scientific notation, and extend the understanding of rational numbers to irrational numbers.

MA.8.NSO.1.1 Extend previous understanding of rational numbers to define irrational numbers within the real number system. Locate an approximate value of a numerical expression involving irrational numbers on a number line.

Example: Within the expression $1 + \sqrt{30}$, the irrational number $\sqrt{30}$ can be estimated to be between 5 and 6 because 30 is between 25 and 36. By considering $(5.4)^2$ and $(5.5)^2$, a closer approximation for $\sqrt{30}$ is 5.5. So, the expression $1 + \sqrt{30}$ is equivalent to about 6.5.

Benchmark Clarifications:

Clarification 1: Instruction includes the use of number line and rational number approximations, and recognizing pi (π) as an irrational number.

Clarification 2: Within this benchmark, the expectation is to approximate numerical expressions involving one arithmetic operation and estimating square roots or pi (π).

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 1 Rational Numbers

- 1-1 The Rational Numbers—SB/TE pp. 2–3
- 1-2 The Rational Numbers on a Number Line—SB/TE pp. 4–5

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 1-1 The Rational Numbers—PB pp. 1–2/TE pp. 3A–3B
- 1-2 The Rational Numbers on a Number Line—PB pp. 3–4/TE pp. 5A–5B

DIGITAL RESOURCES (TEACHER EDITION)*/FULL ACCESS**

Chapter 1 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 1 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 2 Real Numbers

- 2-5 Irrational Numbers—SB/TE pp. 44–45

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 2-5 Irrational Numbers—PB pp. 47–48/TE pp. 45A–45B

DIGITAL RESOURCES (TEACHER EDITION)*/FULL ACCESS**

Chapter 2 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 2 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 2 Reteach Lessons & Practice/Reteach Teacher Support

- Understand Rational and Irrational Numbers
- Use Rational Approximations of Irrational Numbers (number line)

Chapter 2 Reteach Videos

- Rational and Irrational Numbers

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Number Sense and Operations

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.NSO.1 Solve problems involving rational numbers, including numbers in scientific notation, and extend the understanding of rational numbers to irrational numbers.

MA.8.NSO.1.2 Plot, order and compare rational and irrational numbers, represented in various forms.

Benchmark Clarifications:

Clarification 1: Within this benchmark, it is not the expectation to work with the number *e*.

Clarification 2: Within this benchmark, the expectation is to plot, order and compare square roots and cube roots.

Clarification 3: Within this benchmark, the expectation is to use symbols (<, > or =).

continued

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 1 Rational Numbers

- 1-2 The Rational Numbers on a Number Line—SB/TE pp. 4–5
- 1-5 Compare and Order Rational Numbers—SB/TE pp. 10–11

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 1-2 The Rational Numbers on a Number Line—PB pp. 3–4/TE pp. 5A–5B
- 1-5 Compare and Order Rational Numbers—PB pp. 9–10/TE pp. 11A–11B

DIGITAL RESOURCES (TEACHER EDITION)*/FULL ACCESS**

Chapter 1 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 1 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 2 Real Numbers

- 2-3 Perfect Squares and Square Roots—SB/TE pp. 40–41
- 2-4 Estimate Square Roots—SB/TE pp. 42–43
- 2-5 Irrational Numbers—SB/TE pp. 44–45
- 2-6 Square Roots as Irrational Numbers—SB/TE pp. 46–47
- 2-7 The Real Number System—SB/TE pp. 48–49

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 2-3 Perfect Squares and Square Roots—PB pp. 43–44/TE pp. 41A–41B
- 2-4 Estimate Square Roots—PB pp. 45–46/TE pp. 43A–43B
- 2-5 Irrational Numbers—PB pp. 47–48/TE pp. 45A–45B
- 2-6 Square Roots as Irrational Numbers—PB pp. 49–50/TE pp. 47A–47B
- 2-7 The Real Number System—PB pp. 51–52/TE pp. 49A–49B

DIGITAL RESOURCES (TEACHER EDITION)*/FULL ACCESS**

Chapter 2 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 2 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 2 Reteach Lessons & Practice/Reteach Teacher Support

- Understand Rational and Irrational Numbers
- Use Rational Approximations of Irrational Numbers (number line)

Chapter 2 Reteach Videos

- Rational and Irrational Numbers

continued

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Number Sense and Operations

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.NSO.1 Solve problems involving rational numbers, including numbers in scientific notation, and extend the understanding of rational numbers to irrational numbers.

continued

MA.8.NSO.1.2 Plot, order and compare rational and irrational numbers, represented in various forms.

Benchmark Clarifications:

Clarification 1: Within this benchmark, it is not the expectation to work with the number *e*.

Clarification 2: Within this benchmark, the expectation is to plot, order and compare square roots and cube roots.

Clarification 3: Within this benchmark, the expectation is to use symbols (<, > or =).

continued

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 12 Three-Dimensional Geometry

- 12-5A Perfect Cubes and Cube Roots—Online
- 12-5B Use Cube Root Symbols—Online

DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)*

- 12-5A Perfect Cubes and Cube Roots
- 12-5B Use Cube Root Symbols

DIGITAL RESOURCES (TEACHER EDITION)*/FULL ACCESS**

Chapter 12 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 12 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 12 Reteach Lessons & Practice/Reteach Teacher Support

- Evaluate Square Roots and Cube Roots
- Solve Simple Equations Involving Squares and Cubes

Chapter 12 Reteach Videos

- Evaluate Square Roots and Cube Roots

MA.8.NSO.1.3 Extend previous understanding of the Laws of Exponents to include integer exponents. Apply the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to integer exponents and rational number bases, with procedural fluency.

Example: The expression $\frac{2^4}{2^7}$ is equivalent to 2^{-3} which is equivalent to $\frac{1}{8}$.

Benchmark Clarifications:

Clarification 1: Refer to the *K-12 Formulas* (Appendix E) for the Laws of Exponents.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 1 Rational Numbers

- 1-12 Integral Exponents—SB/TE pp. 24–25
- 1-13 Powers and Exponents—SB/TE pp. 26–27

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 1-12 Integral Exponents—PB pp. 23–24/TE pp. 25A–25B
- 1-13 Powers and Exponents—PB pp. 25–26/TE pp. 27A–27B

DIGITAL RESOURCES*

Chapter 1 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 1 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 1 Reteach Lessons & Practice/Reteach Teacher Support

- Understand Zero and Negative Exponents
- Learn Properties of Exponents
- Use Properties of Exponents to Generate Equivalent Expressions

Chapter 1 Reteach Videos

- Understand Zero and Negative Exponents
- Properties of Exponents

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Number Sense and Operations

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.NSO.1 Solve problems involving rational numbers, including numbers in scientific notation, and extend the understanding of rational numbers to irrational numbers.

MA.8.NSO.1.4 Express numbers in scientific notation to represent and approximate very large or very small quantities. Determine how many times larger or smaller one number is compared to a second number. *Example:* Roderick is comparing two numbers shown in scientific notation on his calculator. The first number was displayed as 2.3147E27 and the second number was displayed as 3.5982E−5. Roderick determines that the first number is about 10^{32} times bigger than the second number.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 2 REAL NUMBERS** • 2-1 Scientific Notation—SB/TE pp. 36–37 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 2-1 Scientific Notation—PB pp. 39–40/TE pp. 37A–37B DIGITAL RESOURCES* Chapter 2 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 2 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 2 Reteach Lessons & Practice/Reteach Teacher Support • Estimate and Compare Large or Small Quantities
MA.8.NSO.1.5 Add, subtract, multiply and divide numbers expressed in scientific notation with procedural fluency. *Example:* The sum of 2.31×10^{15} and 9.1×10^{13} is 2.401×10^{15}. **Benchmark Clarifications:** *Clarification 1:* Within this benchmark, for addition and subtraction with numbers expressed in scientific notation, exponents are limited to within 2 of each other.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 2 REAL NUMBERS** • 2-2 Multiply and Divide in Scientific Notation—SB/TE pp. 38–39 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 2-2 Multiply and Divide in Scientific Notation—PB pp. 41–42/TE pp. 39A–39B DIGITAL RESOURCES* Chapter 2 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 2 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 2 Reteach Lessons & Practice/Reteach Teacher Support • Calculate with Numbers in Scientific Notation
MA.8.NSO.1.6 Solve real-world problems involving operations with numbers expressed in scientific notation. **Benchmark Clarifications:** *Clarification 1:* Instruction includes recognizing the importance of significant digits when physical measurements are involved. *Clarification 2:* Within this benchmark, for addition and subtraction with numbers expressed in scientific notation, exponents are limited to within 2 of each other.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 2 REAL NUMBERS** • 2-2 Multiply and Divide in Scientific Notation—SB/TE pp. 38–39 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 2-2 Multiply and Divide in Scientific Notation—PB pp. 41–42/TE pp. 39A–39B DIGITAL RESOURCES* Chapter 2 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 2 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 2 Reteach Lessons & Practice/Reteach Teacher Support • Calculate with Numbers in Scientific Notation

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Number Sense and Operations

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.NSO.1 Solve problems involving rational numbers, including numbers in scientific notation, and extend the understanding of rational numbers to irrational numbers.

MA.8.NSO.1.7 Solve multi-step mathematical and real-world problems involving the order of operations with rational numbers including exponents and radicals.

Example: The expression $\left(-\frac{1}{2}\right)^2 + \sqrt{(2^3+8)}$ is equivalent to $\frac{1}{4} + \sqrt{16}$ which is equivalent to $\frac{1}{4} + 4$ which is equivalent to $\frac{17}{4}$.

Benchmark Clarifications:

Clarification 1: Multi-step expressions are limited to 6 or fewer steps.

Clarification 2: Within this benchmark, the expectation is to simplify radicals by factoring square roots of perfect squares up to 225 and cube roots of perfect cubes from -125 to 125.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 1 Rational Numbers

- 1-14 Order of Operations with Rational Numbers—SB/TE pp. 28–29

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 1-14 Order of Operations with Rational Numbers—PB pp. 27–28/TE pp. 29A–29B

DIGITAL RESOURCES*

Chapter 1 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 1 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 1 Reteach Lessons & Practice/Reteach Teacher Support

- Use Properties of Exponents to Generate Equivalent Expressions

Chapter 1 Reteach Videos

- Properties of Exponents

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 3 Expressions and Equations

- 3-2 Simplify and Evaluate Algebraic Expressions—SB/TE pp. 66–67

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 3-2 Simplify and Evaluate Algebraic Expressions—PB pp. 73–74/TE pp. 67A–67B

DIGITAL RESOURCES*

Chapter 3 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 3 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Algebraic Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.AR.1 Generate equivalent algebraic expressions.

MA.8.AR.1.1 Apply the Laws of Exponents to generate equivalent algebraic expressions, limited to integer exponents and monomial bases.

Example: The expression $(3x^3y^{-2})^3$ is equivalent to $27x^9y^{-6}$.

Benchmark Clarifications:
Clarification 1: Refer to the *K-12 Formulas* (Appendix E) for the Laws of Exponents.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 1 RATIONAL NUMBERS

- 1-12 Integral Exponents—SB/TE pp. 24–25
- 1-13 Powers and Exponents—SB/TE pp. 26–27

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 1-12 Integral Exponents—PB pp. 23–24/TE pp. 25A–25B
- 1-13 Powers and Exponents—PB pp. 25–26/TE pp. 27A–27B

DIGITAL RESOURCES*

Chapter 1 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 1 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 1 Reteach Lessons & Practice/Reteach Teacher Support

- Use Properties of Exponents to Generate Equivalent Expressions

MA.8.AR.1.2 Apply properties of operations to multiply two linear expressions with rational coefficients.

Example: The product of $(1.1 + x)$ and $(-2.3x)$ can be expressed as $-2.53x - 2.3x^2$ or $-2.3x^2 - 2.53x$.

Benchmark Clarifications:
Clarification 1: Problems are limited to products where at least one of the factors is a monomial.
Clarification 2: Refer to *Properties of Operations, Equality and Inequality* (Appendix D).

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 2 REAL NUMBERS

- 2-8 Properties of Real Numbers—SB/TE pp. 50–51

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 2-8 Properties of Real Numbers—PB pp. 53–54/TE pp. 51A–51B

DIGITAL RESOURCES*

Chapter 2 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 2 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 2 Reteach Lessons & Practice/Reteach Teacher Support

- Calculate with Numbers in Scientific Notation

MA.8.AR.1.3 Rewrite the sum of two algebraic expressions having a common monomial factor as a common factor multiplied by the sum of two algebraic expressions.

Example: The expression $99x - 11x^3$ can be rewritten as $11x(9 - x^2)$ or as $-11x(-9 + x^2)$.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 3 EXPRESSIONS AND EQUATIONS

- 3-2 Simplify and Evaluate Algebraic Expressions—SB/TE pp. 66–67

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 3-2 Simplify and Evaluate Algebraic Expressions—PB pp. 73–74/TE pp. 67A–67B

DIGITAL RESOURCES*

Chapter 3 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 3 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Algebraic Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.AR.2 Solve multi-step one-variable equations and inequalities.

MA.8.AR.2.1 Solve multi-step linear equations in one variable, with rational number coefficients. Include equations with variables on both sides. **Benchmark Clarifications:** *Clarification 1:* : Problem types include examples of one-variable linear equations that generate one solution, infinitely many solutions or no solution.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 3 EXPRESSIONS AND EQUATIONS** • 3-6 Model Two-Step Equations—SB/TE pp. 74–75 • 3-7 Two-Step Equations—SB/TE pp. 76–77 • 3-8 Multistep Equations with Grouping Symbols—SB/TE pp. 78–79 • 3-9 Multistep Equations with Variables on Both Sides—SB/TE pp. 80–81 • 3-10 Multistep Equations: Fractions and Decimals—SB/TE pp. 82–83 • 3-10A Identify Equations with One, Many, or No Solutions—Online • 3-10B Solve Equations with One, Many, or No Solutions—Online STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 3-6 Model Two-Step Equations—PB pp. 81–82/TE pp. 75A–75B • 3-7 Two-Step Equations—PB pp. 83–84/TE pp. 77A–77B • 3-8 Multistep Equations with Grouping Symbols—PB pp. 85–86/TE pp. 79A–79B • 3-9 Multistep Equations with Variables on Both Sides—PB pp. 87–88/TE pp. 81A–81B • 3-10 Multistep Equations: Fractions and Decimals—PB pp. 89–90/TE pp. 83A–83B DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)* • 3-10A Identify Equations with One, Many, or No Solutions • 3-10B Solve Equations with One, Many, or No Solutions DIGITAL RESOURCES* Chapter 3 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 3 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 3 Reteach Lessons & Practice/Reteach Teacher Support • Solve Linear Equations Chapter 3 Reteach Videos • Solve Linear Equations
MA.8.AR.2.2 Solve two-step linear inequalities in one variable and represent solutions algebraically and graphically. **Benchmark Clarifications:** *Clarification 1:* Instruction includes inequalities in the forms $px \pm q > r$ and $p(x \pm q) > r$, where p, q and r are specific rational numbers and where any inequality symbol can be represented. *Clarification 2:* Problems include inequalities where the variable may be on either side of the inequality. *continued*	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 4 INEQUALITIES** • 4-7 Two-Step Inequalities—SB/TE pp. 108–109 • 4-8 Multistep Inequalities with Grouping Symbols—SB/TE pp. 110–111 • 4-9 Multistep Inequalities with Variables on Both Sides—SB/TE pp. 112–113 • 4-10 Multistep Inequalities: Fractions and Decimals—SB/TE pp. 114–115 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 4-7 Two-Step Inequalities—PB pp. 119–120/TE pp. 109A–109B • 4-8 Multistep Inequalities with Grouping Symbols—PB pp. 121–122/TE pp. 111A–111B • 4-9 Multistep Inequalities with Variables on Both Sides—PB pp. 123–124/TE pp. 113A–113B • 4-10 Multistep Inequalities: Fractions and Decimals—PB pp. 125–126/TE pp. 115A–115B *continued*

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Algebraic Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.AR.2 Solve multi-step one-variable equations and inequalities.

continued

MA.8.AR.2.2 Solve two-step linear inequalities in one variable and represent solutions algebraically and graphically.

Benchmark Clarifications:

Clarification 1: Instruction includes inequalities in the forms $px \pm q > r$ and $p(x \pm q) > r$, where p, q and r are specific rational numbers and where any inequality symbol can be represented.

Clarification 2: Problems include inequalities where the variable may be on either side of the inequality.

continued

DIGITAL RESOURCES*

Chapter 3 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 3 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Related content

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 4 Inequalities

- 4-1 Inequalities—SB/TE pp. 96–97
- 4-2 Inequalities: Solution Set—SB/TE pp. 98–99
- 4-3 One-Step Addition Inequalities—SB/TE pp. 100–101
- 4-4 One-Step Subtraction Inequalities—SB/TE pp. 102–103
- 4-5 One-Step Multiplication Inequalities—SB/TE pp. 104–105
- 4-6 One-Step Division Inequalities—SB/TE pp. 106–107

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 4-1 Inequalities—PB pp. 107–108/TE pp. 97A–97B
- 4-2 Inequalities: Solution Set—PB pp. 109–110/TE pp. 99A–99B
- 4-3 One-Step Addition Inequalities—PB pp. 111–112/TE pp. 101A–101B
- 4-4 One-Step Subtraction Inequalities—PB pp. 113–114/TE pp. 103A–103B
- 4-5 One-Step Multiplication Inequalities—PB pp. 115–116/TE pp. 105A–105B
- 4-6 One-Step Division Inequalities—PB pp. 117–118/TE pp. 107A–107B

MA.8.AR.2.3 Given an equation in the form of $x^2 = p$ and $x^3 = q$, where p is a whole number and q is an integer, determine the real solutions.

Benchmark Clarifications:

Clarification 1: Instruction focuses on understanding that when solving $x^2 = p$, there is both a positive and negative solution.

Clarification 2: Within this benchmark, the expectation is to calculate square roots of perfect squares up to 225 and cube roots of perfect cubes from -125 to 125.

continued

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 2 Real Numbers

- 2-3 Perfect Squares and Square Roots—SB/TE pp. 40–41
- 2-6 Square Roots as Irrational Numbers—SB/TE pp. 46–47

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 2-3 Perfect Squares and Square Roots—PB pp. 43–44/TE pp. 41A–41B
- 2-6 Square Roots as Irrational Numbers—PB pp. 49–50/TE pp. 47A–47B

DIGITAL RESOURCES*

Chapter 2 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 2 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

continued

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Algebraic Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.AR.2 Solve multi-step one-variable equations and inequalities.

continued **MA.8.AR.2.3** Given an equation in the form of $x^2 = p$ and $x^3 = q$, where p is a whole number and q is an integer, determine the real solutions. **Benchmark Clarifications:** *Clarification 1:* Instruction focuses on understanding that when solving $x^2 = p$, there is both a positive and negative solution. *Clarification 2:* Within this benchmark, the expectation is to calculate square roots of perfect squares up to 225 and cube roots of perfect cubes from -125 to 125.	*continued* STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 12 THREE-DIMENSIONAL GEOMETRY** • 12-5A Perfect Cubes and Cube Roots—Online • 12-5B Use Cube Root Symbols—Online DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)* • 12-5A Perfect Cubes and Cube Roots • 12-5B Use Cube Root Symbols DIGITAL RESOURCES* Chapter 12 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 12 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 12 Reteach Lessons & Practice/Reteach Teacher Support • Evaluate Square Roots and Cube Roots Chapter 12 Reteach Videos • Evaluate Square Roots and Cube Roots

MA.8.AR.3 Extend understanding of proportional relationships to two-variable linear equations.

MA.8.AR.3.1 Determine if a linear relationship is also a proportional relationship. **Benchmark Clarifications:** *Clarification 1:* Instruction focuses on the understanding that proportional relationships are linear relationships whose graph passes through the origin. *Clarification 2:* Instruction includes the representation of relationships using tables, graphs, equations and written descriptions.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-9 Direct Variation—SB/TE pp. 172–173 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-9 Direct Variation—PB pp. 191–192/TE pp. 173A–173B DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary
MA.8.AR.3.2 Given a table, graph or written description of a linear relationship, determine the slope. **Benchmark Clarifications:** *Clarification 1:* Problem types include cases where two points are given to determine the slope. *Clarification 2:* Instruction includes making connections of slope to the constant of proportionality and to similar triangles represented on the coordinate plane. *continued*	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-4 Slope of a Line—SB/TE pp. 162–163 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-4 Slope of a Line—PB pp. 181–182/TE pp. 163A–163B DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys *continued*

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Algebraic Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.AR.3 Extend understanding of proportional relationships to two-variable linear equations.

<table>
<tr>
<td>

continued

MA.8.AR.3.2 Given a table, graph or written description of a linear relationship, determine the slope.

Benchmark Clarifications:

Clarification 1: Problem types include cases where two points are given to determine the slope.

Clarification 2: Instruction includes making connections of slope to the constant of proportionality and to similar triangles represented on the coordinate plane.

</td>
<td>

continued

Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support

- Understand Slope

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 7 Ratio and Proportion

- 7-2 Proportions—SB/TE pp. 190–191
- 7-9 Similarity—SB/TE pp. 204–205

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 7-2 Proportions—PB pp. 213–214/TE pp. 191A–191B
- 7-9 Similarity—PB pp. 227–228/TE pp. 205A–205B

DIGITAL RESOURCES*

Chapter 7 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 7 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 7 Reteach Lessons & Practice/Reteach Teacher Support

- Understand Proportional Relationships and Slope
- Identify Similar Figures

Chapter 7 Reteach Videos

- Understand Proportional Relationships and Slope

</td>
</tr>
<tr>
<td>

MA.8.AR.3.3 Given a table, graph or written description of a linear relationship, write an equation in slope-intercept form.

</td>
<td>

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 6 Linear Functions and Inequalities

- 6-6 Linear Functions: Standard Form and Slope-Intercept Form—SB/TE pp. 166–167

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 6-6 Linear Functions: Standard Form and Slope-Intercept Form—PB pp. 185–186/TE pp. 167A–167B

DIGITAL RESOURCES*

Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support

- Write Equations for Lines

Chapter 7 Reteach Videos

- Write Equations for Lines

</td>
</tr>
</table>

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Algebraic Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.AR.3 Extend understanding of proportional relationships to two-variable linear equations.

MA.8.AR.3.4 Given a mathematical or real-world context, graph a two-variable linear equation from a written description, a table or an equation in slope-intercept form.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-6 Linear Functions: Standard Form and Slope-Intercept Form—SB/TE pp. 166–167 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-6 Linear Functions: Standard Form and Slope-Intercept Form—PB pp. 185–186/TE pp. 167A–167B DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary
MA.8.AR.3.5 Given a real-world context, determine and interpret the slope and y-intercept of a two-variable linear equation from a written description, a table, a graph or an equation in slope-intercept form. *Example:* Raul bought a palm tree to plant at his house. He records the growth over many months and creates the equation $h = 0.21m + 4.9$, where h is the height of the palm tree in feet and m is the number of months. Interpret the slope and y-intercept from his equation. **Benchmark Clarifications:** *Clarification 1:* Problems include conversions with temperature and equations of lines of fit in scatter plots.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-4 Slope of a Line—SB/TE pp. 162–163 • 6-5 The x- and y-Intercepts of a Line—SB/TE pp. 164–165 • 6-6 Linear Functions: Standard Form and Slope-Intercept Form—SB/TE pp. 166–167 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-4 Slope of a Line—PB pp. 181–182/TE pp. 163A–163B • 6-5 The x- and y-Intercepts of a Line—PB pp. 183–184/TE pp. 165A–165B • 6-6 Linear Functions: Standard Form and Slope-Intercept Form—PB pp. 185–186/TE pp. 167A–167B DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support • Understand Slope

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Algebraic Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.AR.4 Develop an understanding of two-variable systems of equations.

MA.8.AR.4.1 Given a system of two linear equations and a specified set of possible solutions, determine which ordered pairs satisfy the system of linear equations. **Benchmark Clarifications:** *Clarification 1:* Instruction focuses on the understanding that a solution to a system of equations satisfies both linear equations simultaneously.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-10 Solve Systems of Equations by Graphing—SB/TE pp. 174–175 • 6-11A Use Systems to Solve Problems—Online STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-10 Solve Systems of Equations by Graphing—PB pp. 193–194/TE pp. 175A–175B DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)* • 6-11A Use Systems to Solve Problems DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support • Solve Systems of Equations • Problem-Solving: Systems of Equations Chapter 7 Reteach Videos • Solve Systems of Equations
MA.8.AR.4.2 Given a system of two linear equations represented graphically on the same coordinate plane, determine whether there is one solution, no solution or infinitely many solutions.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-10 Solve Systems of Equations by Graphing—SB/TE pp. 174–175 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-10 Solve Systems of Equations by Graphing—PB pp. 193–194/TE pp. 175A–175B DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support • Solve Systems of Equations • Problem-Solving: Systems of Equations Chapter 7 Reteach Videos • Solve Systems of Equations

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Algebraic Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.AR.4 Develop an understanding of two-variable systems of equations.

MA.8.AR.4.3 Given a mathematical or real-world context, solve systems of two linear equations by graphing. **Benchmark Clarifications:** *Clarification 1:* Instruction includes approximating non-integer solutions. *Clarification 2:* Within this benchmark, it is the expectation to represent systems of linear equations in slope-intercept form only. *Clarification 3:* Instruction includes recognizing that parallel lines have the same slope.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-10 Solve Systems of Equations by Graphing—SB/TE pp. 174–175 • 6-11A Use Systems to Solve Problems—Online STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-10 Solve Systems of Equations by Graphing—PB pp. 193–194/TE pp. 175A–175B DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)* • 6-11A Use Systems to Solve Problems DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support • Solve Systems of Equations • Problem-Solving: Systems of Equations Chapter 7 Reteach Videos • Solve Systems of Equations

Functions

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.F.1 Define, evaluate and compare functions.

MA.8.F.1.1 Given a set of ordered pairs, a table, a graph or mapping diagram, determine whether the relationship is a function. Identify the domain and range of the relation. **Benchmark Clarifications:** *Clarification 1:* Instruction includes referring to the input as the independent variable and the output as the dependent variable. *Clarification 2:* Within this benchmark, it is the expectation to represent domain and range as a list of numbers or as an inequality.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-1 Relations and Functions—SB/TE pp. 156–157 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-1 Relations and Functions—PB pp. 175–176/TE pp. 157A–157B DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support • Understand Functions Chapter 7 Reteach Videos • Understanding and Representing Functions

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Functions

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.F.1 Define, evaluate and compare functions.

MA.8.F.1.2 Given a function defined by a graph or an equation, determine whether the function is a linear function. Given an input-output table, determine whether it could represent a linear function. **Benchmark Clarifications:** *Clarification 1:* Instruction includes recognizing that a table may not determine a function.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-1 Relations and Functions—SB/TE pp. 156–157 • 6-2 Graphs of Functions (input/output tables)—SB/TE pp. 158–159 • 6-5 The *x*- and *y*-Intercepts of a Line—SB/TE pp. 164–165 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-1 Relations and Functions—PB pp. 175–176/TE pp. 157A–157B • 6-2 Graphs of Functions—PB pp. 177–178/TE pp. 159A–159B • 6-5 The *x*- and *y*-Intercepts of a Line—PB pp. 183–184/TE pp. 165A–165B DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support • Represent Functions Chapter 7 Reteach Videos • Understanding and Representing Functions
MA.8.F.1.3 Analyze a real-world written description or graphical representation of a functional relationship between two quantities and identify where the function is increasing, decreasing or constant. **Benchmark Clarifications:** *Clarification 1:* Problem types are limited to continuous functions. *Clarification 2:* Analysis includes writing a description of a graphical representation or sketching a graph from a written description.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-6 Linear Functions: Standard Form and Slope-Intercept Form—SB/TE pp. 166–167 • 6-7 Linear Functions: Point-Slope Form—SB/TE pp. 168–169 • 6-7A Analyzing Trend Lines—Online • 6-7B Use Linear Models to Solve Problems—Online STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-6 Linear Functions: Standard Form and Slope-Intercept Form—PB pp. 185–186/TE pp. 167A–167B • 6-7 Linear Functions: Point-Slope Form—PB pp. 187–188/TE pp. 169A–169B DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)* • 6-7A Analyzing Trend Lines • 6-7B Use Linear Models to Solve Problems DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support • Problem Solving: Use Linear Models

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Geometric Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.GR.1 Develop an understanding of the Pythagorean Theorem and angle relationships involving triangles.

MA.8.GR.1.1 Apply the Pythagorean Theorem to solve mathematical and real-world problems involving unknown side lengths in right triangles.

Benchmark Clarifications:

Clarification 1: Instruction includes exploring right triangles with natural-number side lengths to illustrate the Pythagorean Theorem.

Clarification 2: Within this benchmark, the expectation is to memorize the Pythagorean Theorem.

Clarification 3: Radicands are limited to whole numbers up to 225.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 2 Real Numbers

- 2-9 Pythagorean Theorem—SB/TE pp. 52–53
- 2-9A Proof of the Pythagorean Theorem—Online
- 2-10 Special Right Triangles—SB/TE pp. 54–55

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 2-9 Pythagorean Theorem—PB pp. 55–56/TE pp. 53A–53B
- 2-10 Special Right Triangles—PB pp. 57–58/TE pp. 55A–55B

DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)*

- 2-9A Proof of the Pythagorean Theorem

DIGITAL RESOURCES*

Chapter 2 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 2 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 2 Reteach Lessons & Practice/Reteach Teacher Support

- Understand the Pythagorean Theorem

Chapter 2 Reteach Videos

- Understanding the Pythagorean Theorem and its Converse

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 7 Ratio and Proportion

- 7-9 Similarity (find unknown length of a leg of a right triangle)—SB/TE pp. 204–205

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 7-9 Similarity—PB pp. 227–228/TE pp. 205A–205B

DIGITAL RESOURCES*

Chapter 7 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 7 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 12 Three-Dimensional Geometry

- 12-6A Compute Missing Dimensions of Three-Dimensional Figures—Online

DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)*

- 12-6A Compute Missing Dimensions of Three-Dimensional Figures

DIGITAL RESOURCES*

Chapter 12 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 12 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Geometric Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.GR.1 Develop an understanding of the Pythagorean Theorem and angle relationships involving triangles.

MA.8.GR.1.2 Apply the Pythagorean Theorem to solve mathematical and real-world problems involving the distance between two points in a coordinate plane.

Example: The distance between (−2, 7) and (0, 6) can be found by creating a right triangle with the vertex of the right angle at the point (−2, 6). This gives a height of the right triangle as 1 unit and a base of 2 units. Then using the Pythagorean Theorem the distance can be determined from the equation $1^2 + 2^2 = c^2$, which is equivalent to $5 = c^2$. So, the distance is $\sqrt{5}$ units.

Benchmark Clarifications:

Clarification 1: Instruction includes making connections between distance on the coordinate plane and right triangles.

Clarification 2: Within this benchmark, the expectation is to memorize the Pythagorean Theorem. It is not the expectation to use the distance formula.

Clarification 3: Radicands are limited to whole numbers up to 225.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 10 GEOMETRIC MEASURES AND COORDINATE GEOMETRY

- 10-7 Coordinate Plane and Polygons—SB/TE pp. 278–279
- 10-7A Apply Pythagorean Theorem—Online

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 10-7 Coordinate Plane and Polygons—PB pp. 313–314/TE pp. 279A–279B

DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)*

- 10-7A Apply Pythagorean Theorem

DIGITAL RESOURCES*

Chapter 10 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 10 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 10 Reteach Lessons & Practice/Reteach Teacher Support

- Calculate Distances in the Coordinate Plane

Chapter 10 Reteach Videos

- Calculate Distances in the Coordinate Plane

MA.8.GR.1.3 Use the Triangle Inequality Theorem to determine if a triangle can be formed from a given set of sides. Use the converse of the Pythagorean Theorem to determine if a right triangle can be formed from a given set of sides.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 2 REAL NUMBERS

- 2-9 Pythagorean Theorem: Converse of the Pythagorean Theorem—SB/TE pp. 52–53
- 2-9A Proof of the Pythagorean Theorem (Converse)—Online

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 2-9 Pythagorean Theorem—PB pp. 55–56/TE pp. 53A–53B

DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)*

- 2-9A Proof of the Pythagorean Theorem

DIGITAL RESOURCES*

Chapter 2 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 2 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 2 Reteach Lessons & Practice/Reteach Teacher Support

- Understand the Pythagorean Theorem
- Understand the Converse of the Pythagorean Theorem

Chapter 2 Reteach Videos

- Understanding the Pythagorean Theorem and its Converse

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Geometric Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.GR.1 Develop an understanding of the Pythagorean Theorem and angle relationships involving triangles.

MA.8.GR.1.4 Solve mathematical problems involving the relationships between supplementary, complementary, vertical or adjacent angles.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 9 TWO-DIMENSIONAL GEOMETRY** • 9-1 Angle Pairs—SB/TE pp. 236–237 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 9-1 Angle Pairs—PB pp. 267–268/TE pp. 237A–237B DIGITAL RESOURCES* Chapter 9 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 9 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary
MA.8.GR.1.5 Solve problems involving the relationships of interior and exterior angles of a triangle. Benchmark Clarifications: *Clarification 1:* Problems include using the Triangle Sum Theorem and representing angle measures as algebraic expressions.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 9 TWO-DIMENSIONAL GEOMETRY** • 9-2 Angles of Parallel Lines—SB/TE pp. 238–239 • 9-3 Classifying Polygons—SB/TE pp. 240–241 • 9-4 Angles of Polygons—SB/TE pp. 242–243 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 9-2 Angles of Parallel Lines—PB pp. 269–270/TE pp. 239A–239B • 9-3 Classifying Polygons—PB pp. 271–272/TE pp. 241A–241B • 9-4 Angles of Polygons—PB pp. 273–274/TE pp. 243A–243B DIGITAL RESOURCES* Chapter 9 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 9 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary
MA.8.GR.1.6 Develop and use formulas for the sums of the interior angles of regular polygons by decomposing them into triangles. Benchmark Clarifications: *Clarification 1:* Problems include representing angle measures as algebraic expressions.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 9 TWO-DIMENSIONAL GEOMETRY** • 9-4 Angles of Polygons—SB/TE pp. 242–243 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 9-4 Angles of Polygons—PB pp. 273–274/TE pp. 243A–243B DIGITAL RESOURCES* Chapter 9 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 9 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Geometric Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.GR.2 Understand similarity and congruence using models and trasnformations.

MA.8.GR.2.1 Given a preimage and image generated by a single transformation, identify the transformation that describes the relationship.

Benchmark Clarifications:
Clarification 1: Within this benchmark, transformations are limited to reflections, translations or rotations of images.
Clarification 2: Instruction focuses on the preservation of congruence so that a figure maps onto a copy of itself.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 10 GEOMETRIC MEASURES AND COORDINATE GEOMETRY

- 10-8 Coordinate Plane: Reflections and Translations—SB/TE pp. 280–281
- 10-9 Coordinate Plane: Rotations—SB/TE pp. 282–283
- 10-11A Transformations and Congruence—Online

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 10-8 Coordinate Plane: Reflections and Translations—PB pp. 315–316/TE pp. 281A–281B
- 10-9 Coordinate Plane: Rotations—PB pp. 317–318/TE pp. 283A–283B

DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)*

- 10-11A Transformations and Congruence

DIGITAL RESOURCES*

Chapter 10 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 10 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 10 Reteach Lessons & Practice/Reteach Teacher Support

- Verify Properties of Reflections and Translations
- Verify Properties of Rotations
- Reflect and Translate Figures on the Coordinate Plane
- Rotate Figures on the Coordinate Plane
- Dilate Figures on the Coordinate Plane

Chapter 10 Reteach Videos

- Properties of Reflections and Translations
- Reflect and Translate Figures on the Coordinate Plane
- Identifying Similar Figures and Rotating and Dilating Figures

MA.8.GR.2.2 Given a preimage and image generated by a single dilation, identify the scale factor that describes the relationship.

Benchmark Clarifications:
Clarification 1: Instruction includes the connection to scale drawings and proportions.
Clarification 2: Instruction focuses on the preservation of similarity and the lack of preservation of congruence when a figure maps onto a scaled copy of itself, unless the scaling factor is 1.

continued

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 7 RATIO AND PROPORTION

- 7-8 Scale Drawings and Scale Models—SB/TE pp. 202–203
- 7-9 Similarity—SB/TE pp. 204–205

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 7-8 Scale Drawings and Scale Models—PB pp. 225–226/TE pp. 203A–203B
- 7-9 Similarity—PB pp. 227–228/TE pp. 205A–205B

DIGITAL RESOURCES*

Chapter 7 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 7 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 7 Reteach Lessons & Practice/Reteach Teacher Support

- Identify Similar Figures

continued

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Geometric Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.GR.2 Understand similarity and congruence using models and trasnformations.

continued

MA.8.GR.2.2 Given a preimage and image generated by a single dilation, identify the scale factor that describes the relationship.

Benchmark Clarifications:

Clarification 1: Instruction includes the connection to scale drawings and proportions.

Clarification 2: Instruction focuses on the preservation of similarity and the lack of preservation of congruence when a figure maps onto a scaled copy of itself, unless the scaling factor is 1.

continued

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 10 GEOMETRIC MEASURES AND COORDINATE GEOMETRY

- 10-10 Coordinate Plane: Dilations—SB/TE pp. 284–285
- 10-11A Transformations and Congruence—Online
- 10-11B Transformations and Similarity—Online

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 10-10 Coordinate Plane: Dilations—PB pp. 319–320/TE pp. 285A–285B

DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)*

- 10-11A Transformations and Congruence
- 10-11B Transformations and Similarity

DIGITAL RESOURCES*

Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 10 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 10 Reteach Lessons & Practice/Reteach Teacher Support

- Dilate Figures on the Coordinate Plane

Chapter 10 Reteach Videos

- Identifying Similar Figures and Rotating and Dilating Figures

MA.8.GR.2.3 Describe and apply the effect of a single transformation on two-dimensional figures using coordinates and the coordinate plane.

Benchmark Clarifications:

Clarification 1: Within this benchmark, transformations are limited to reflections, translations, rotations or dilations of images.

Clarification 2: Lines of reflection are limited to the x-axis, y-axis or lines parallel to the axes.

Clarification 3: Rotations must be about the origin and are limited to 90°, 180°, 270° or 360°.

Clarification 4: Dilations must be centered at the origin.

continued

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 10 GEOMETRIC MEASURES AND COORDINATE GEOMETRY

- 10-8 Coordinate Plane: Reflections and Translations—SB/TE pp. 280–281
- 10-9 Coordinate Plane: Rotations—SB/TE pp. 282–283
- 10-10 Coordinate Plane: Dilations—SB/TE pp. 284–285
- 10-11 Combine Transformations—SB/TE pp. 286–287
- 10-11A Transformations and Congruence—Online
- 10-11B Transformations and Similarity—Online

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 10-8 Coordinate Plane: Reflections and Translations—PB pp. 315–316/TE pp. 281A–281B
- 10-9 Coordinate Plane: Rotations—PB pp. 317–318/TE pp. 283A–283B
- 10-10 Coordinate Plane: Dilations—PB pp. 319–320/TE pp. 285A–285B
- 10-11 Combine Transformations—PB pp. 321–322/TE pp. 287A–287B

DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)*

- 10-11A Transformations and Congruence
- 10-11B Transformations and Similarity

DIGITAL RESOURCES*

Chapter 10 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

continued

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Geometric Reasoning

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.GR.2 Understand similarity and congruence using models and trasnformations.

continued	*continued*
MA.8.GR.2.3 Describe and apply the effect of a single transformation on two-dimensional figures using coordinates and the coordinate plane. **Benchmark Clarifications:** *Clarification 1:* Within this benchmark, transformations are limited to reflections, translations, rotations or dilations of images. *Clarification 2:* Lines of reflection are limited to the x-axis, y-axis or lines parallel to the axes. *Clarification 3:* Rotations must be about the origin and are limited to 90°, 180°, 270° or 360°. *Clarification 4:* Dilations must be centered at the origin.	Chapter 10 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 10 Reteach Lessons & Practice/Reteach Teacher Support • Verify Properties of Reflections and Translations • Verify Properties of Rotations • Calculate Distances in the Coordinate Plane • Reflect and Translate Figures on the Coordinate Plane • Rotate Figures on the Coordinate Plane • Dilate Figures on the Coordinate Plane Chapter 10 Reteach Videos • Properties of Reflections and Translations • Calculate Distances in the Coordinate Plane • Reflect and Translate Figures on the Coordinate Plane • Identifying Similar Figures and Rotating and Dilating Figures
MA.8.GR.2.4 Solve mathematical and real-world problems involving proportional relationships between similar triangles. *Example:* During a Tampa Bay Lightning game one player, Johnson, passes the puck to his teammate, Stamkos, by bouncing the puck off the wall of the rink. The path of the puck creates two line segments that form hypotenuses for each of two similar right triangles, with the height of each triangle the distance from one of the players to the wall of the rink. If Johnson is 12 feet from the wall and Stamkos is 3 feet from the wall. How far did the puck travel from the wall of the rink to Stamkos if the distance traveled from Johnson to the wall was 16 feet?	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **Chapter 7 Ratio and Proportion** • 7-9 Similarity—SB/TE pp. 204–205 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 7-9 Similarity—PB pp. 227–228/TE pp. 205A–205B DIGITAL RESOURCES* Chapter 7 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 7 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 7 Reteach Lessons & Practice/Reteach Teacher Support • Identify Similar Figures STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **Chapter 9 Two-Dimensional Geometry** • 9-4A Angle-Angle Criterion for Similar Triangles—Online DIGITAL RESOURCES* Chapter 9 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 9 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Data Analysis and Probability

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.DP.1 Represent and investigate numerical bivariate data.

MA.8.DP.1.1 Given a set of real-world bivariate numerical data, construct a scatter plot or a line graph as appropriate for the context.

Example: Jaylyn is collecting data about the relationship between grades in English and grades in mathematics. He represents the data using a scatter plot because he is interested if there is an association between the two variables without thinking of either one as an independent or dependent variable.

Example: Samantha is collecting data on her weekly quiz grade in her social studies class. She represents the data using a line graph with time as the independent variable.

Benchmark Clarifications:

Clarification 1: Instruction includes recognizing similarities and differences between scatter plots and line graphs, and on determining which is more appropriate as a representation of the data based on the context.

Clarification 2: Sets of data are limited to 20 points.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 6 Linear Functions and Inequalities

- 6-3 Scatter Plots—SB/TE pp. 160–161
- 6-3A Analyze Outliers—Online
- 6-3B Clustering—Online
- 6-3C Analyze Scatter Plots—Online

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 6-3 Scatter Plots—PB pp. 179–180/TE pp. 161A–161B

DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)*

- 6-3A Analyze Outliers
- 6-3B Clustering
- 6-3C Analyze Scatter Plots

DIGITAL RESOURCES*

Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support

- Construct and Interpret Scatter Plots

Chapter 6 Reteach Videos

- Construct and Interpret Scatter Plots

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

Chapter 13 Data Analysis and Statistics

- 13-5 Multiple Bar Graphs—SB/TE pp. 352–353
- 13-6 Bar Graph Applications—SB/TE pp. 354–355
- 13-9 Choose Appropriate Graphs—SB/TE pp. 360–361
- 13-10 Misleading Graphs and Statistics—SB/TE pp. 362–363

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 13-5 Multiple Bar Graphs—PB pp. 399–400/TE pp. 353A–353B
- 13-6 Bar Graph Applications—PB pp. 401–402/TE pp. 355A–355B
- 13-9 Choose Appropriate Graphs—PB pp. 407–408/TE pp. 361A–361B
- 13-10 Misleading Graphs and Statistics—PB pp. 409–410/TE pp. 363A–363B

DIGITAL RESOURCES*

Chapter 13 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 13 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Data Analysis and Probability

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.DP.1 Represent and investigate numerical bivariate data.

MA.8.DP.1.2 Given a scatter plot within a real-world context, describe patterns of association. **Benchmark Clarifications:** *Clarification 1:* Descriptions include outliers; positive or negative association; linear or nonlinear association; strong or weak association.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-3 Scatter Plots—SB/TE pp. 160–161 • 6-3A Analyze Outliers—Online • 6-3B Clustering—Online • 6-3C Analyze Scatter Plots—Online • 6-7A Analyzing Trend Lines—Online STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-3 Scatter Plots—PB pp. 179–180/TE pp. 161A–161B DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)* • 6-3A Analyze Outliers • 6-3B Clustering • 6-3C Analyze Scatter Plots DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support • Construct and Interpret Scatter Plots Chapter 6 Reteach Videos • Construct and Interpret Scatter Plots
MA.8.DP.1.3 Given a scatter plot with a linear association, informally fit a straight line. **Benchmark Clarifications:** *Clarification 1:* Instruction focuses on the connection to linear functions. *Clarification 2:* Instruction includes using a variety of tools, including a ruler, to draw a line with approximately the same number of points above and below the line.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **CHAPTER 6 LINEAR FUNCTIONS AND INEQUALITIES** • 6-3 Scatter Plots (line of best fit/correlation)—SB/TE pp. 160–161 • 6-3A Analyze Outliers (draw a line of best fit)—Online • 6-3B Clustering (draw a line of best fit)—Online • 6-3C Analyze Scatter Plots—Online • 6-7A Analyzing Trend Lines (draw a line of best fit)—Online STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 6-3 Scatter Plots—PB pp. 179–180/TE pp. 161A–161B DIGITAL RESOURCES: CHAPTER COMMON CORE LESSON PLANS (TEACHER EDITION)* • 6-3A Analyze Outliers • 6-3B Clustering • 6-3C Analyze Scatter Plots • 6-7A Analyzing Trend Lines DIGITAL RESOURCES* Chapter 6 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 6 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary Chapter 6 Reteach Lessons & Practice/Reteach Teacher Support • Construct and Interpret Scatter Plots Chapter 6 Reteach Videos • Construct and Interpret Scatter Plots

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Data Analysis and Probability

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.DP.2 Represent and find probabilities of repeated experiments.

MA.8.DP.2.1 Determine the sample space for a repeated experiment. **Benchmark Clarifications:** *Clarification 1:* Instruction includes recording sample spaces for repeated experiments using organized lists, tables or tree diagrams. *Clarification 2:* Experiments to be repeated are limited to tossing a fair coin, rolling a fair die, picking a card randomly from a deck with replacement, picking marbles randomly from a bag with replacement and spinning a fair spinner. *Clarification 3:* Repetition of experiments is limited to two times except for tossing a coin.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **Chapter 14 Probability and Logic** • 14-2 Theoretical Probability (sample space)—SB/TE pp. 374–375 • 14-4 Probability and Odds—SB/TE pp. 378–379 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 14-2 Theoretical Probability—PB pp. 425–426/TE pp. 375A–375B • 14-4 Probability and Odds—PB pp. 429–430/TE pp. 379A–379B DIGITAL RESOURCES* Chapter 14 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 14 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary
MA.8.DP.2.2 Find the theoretical probability of an event related to a repeated experiment. **Benchmark Clarifications:** *Clarification 1:* Instruction includes representing probability as a fraction, percentage or decimal. *Clarification 2:* Experiments to be repeated are limited to tossing a fair coin, rolling a fair die, picking a card randomly from a deck with replacement, picking marbles randomly from a bag with replacement and spinning a fair spinner. *Clarification 3:* Repetition of experiments is limited to two times except for tossing a coin.	STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK* **Chapter 14 Probability and Logic** • 14-2 Theoretical Probability—SB/TE pp. 374–375 STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK* • 14-2 Theoretical Probability—PB pp. 425–426/TE pp. 375A–375B DIGITAL RESOURCES* Chapter 14 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys Chapter 14 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

*Digital resources available at SadlierConnect.com
***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.

Data Analysis and Probability

Grade 8

FLORIDA'S B.E.S.T. STANDARDS: MATHEMATICS	SADLIER FOUNDATIONS OF ALGEBRA

MA.8.DP.2 Represent and find probabilities of repeated experiments.

MA.8.DP.2.3 Solve real-world problems involving probabilities related to single or repeated experiments, including making predictions based on theoretical probability.

Example: If Gabriella rolls a fair die 300 times, she can predict that she will roll a 3 approximately 50 times since the theoretical probability is 1 6.

Example: Sandra performs an experiment where she flips a coin three times. She finds the theoretical probability of landing on exactly one head as 3 8 . If she performs this experiment 50 times (for a total of 150 flips), predict the number of repetitions of the experiment that will result in exactly one of the three flips landing on heads.

Benchmark Clarifications:

Clarification 1: Instruction includes making connections to proportional relationships and representing probability as a fraction, percentage or decimal.

Clarification 2: Experiments to be repeated are limited to tossing a fair coin, rolling a fair die, picking a card randomly from a deck with replacement, picking marbles randomly from a bag with replacement and spinning a fair spinner.

Clarification 3: Repetition of experiments is limited to two times except for tossing a coin.

STUDENT SOURCEBOOK & eBOOK*/TEACHER'S EDITION & eBOOK*

CHAPTER 14 PROBABILITY AND LOGIC

- 14-3 Experimental Probability—SB/TE pp. 376–377
- 14-4 Probability and Odds—SB/TE pp. 378–379

STUDENT PRACTICE BOOK & eBOOK/TEACHER'S EDITION & eBOOK*

- 14-3 Experimental Probability—PB pp. 427–428/TE pp. 377A–377B
- 14-4 Probability and Odds—PB pp. 429–430/TE pp. 379A–379B

DIGITAL RESOURCES*

Chapter 14 Teacher Resources: Professional Development; Lesson Planner; Assessment Analysis; Meeting Individual Needs; Item Analysis, Common Error Diagnosis, and Prescription; Algebra 1 Pretest and Analysis; Chapter Test Item Analysis; Practice Book Answer Keys

Chapter 14 Additional Resources: Differentiated Instruction; Assessments; Blackline Masters; Problem of the Day; Games & Study Aids; Student Resources: Mental Math/Glossary

*Digital resources available at SadlierConnect.com

***Full Access* is a data-driven solution with diagnostic assessments, instruction, practice, and detailed reporting. It includes relevant program resources that span various grade levels and allows for differentiation to meet the needs of individual students.