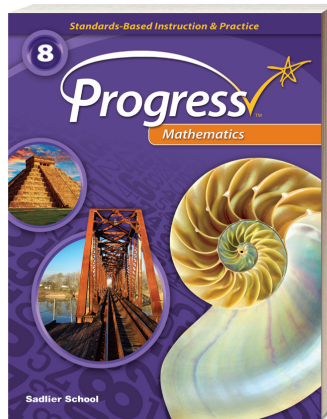


SADLIER

Progress Mathematics

Standards-Based Instruction & Practice



Aligned to the

Pennsylvania Core Standards for Mathematics

Grade 8

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2.1 Numbers and Operations

MATHEMATICS STANDARDS

(E) The Number System

- CC.2.1.8.E.1 Distinguish between rational and irrational numbers using their properties.
- CC.2.1.8.E.4 Estimate irrational numbers by comparing them to rational numbers.

SADLIER PROGRESS MATHEMATICS, GRADE 8

Lesson 1
Understand Rational and Irrational Numbers—pp. 10–17

Lesson 2
Use Rational Approximations of Irrational Numbers—pp. 18–25

2.2 Algebraic Concepts

MATHEMATICS STANDARDS

(B) Expressions & Equations

- CC.2.2.8.B.1 Apply concepts of radicals and integer exponents to generate equivalent expressions.

- CC.2.2.8.B.2 Understand the connections between proportional relationships, lines, and linear equations.

- CC.2.2.8.B.3 Analyze and solve linear equations and pairs of simultaneous linear equations.

SADLIER PROGRESS MATHEMATICS, GRADE 8

Lesson 3
Understand Zero and Negative Exponent—pp. 32–39

Lesson 4
Learn Properties of Exponents—pp. 40–47

Lesson 5
Use Properties of Exponents Generate Equivalent Expressions—pp. 48–55

Lesson 6
Evaluate Square Roots and Cube Roots—pp. 56–63

Lesson 7
Solve Simple Equations Involving Squares and Cubes—pp. 64–71

Lesson 8
Estimate and Compare Large or Small Quantities—pp. 72–79

Lesson 9
Calculate with Numbers in Scientific Notation—pp. 80–87

Lesson 10
Understand Proportional Relationships and Slope—pp. 88–95

Lesson 11
Understand Slope—pp. 96–103

Lesson 12
Write Equations for Lines—pp. 104–111

Lesson 13
Solve Linear Equations—pp. 112–119

2.2 Algebraic Concepts

MATHEMATICS STANDARDS

(C) Functions

CC.2.2.8.C.1 Define, evaluate, and compare functions.

CC.2.2.8.C.2 Use concepts of functions to model relationships between quantities.

SADLIER PROGRESS MATHEMATICS, GRADE 8

Lesson 16
Understand Functions—pp. 142–149

Lesson 17
Represent Functions—pp. 150–157

Lesson 18
Compare Functions—pp. 158–165

Lesson 19
Investigate Linear and Non-Linear Functions—pp. 166–173

Lesson 20
Use Functions to Model Relationships—pp. 174–181

Lesson 21
Problem Solving: Use Linear Models—pp. 182–189

Lesson 22
Analyze Graphs of Functions—pp. 190–197

2.3 Geometry

MATHEMATICS STANDARDS

(A) Geometry

CC.2.3.8.A.1 Understand and apply congruence and similarity using various tools.

SADLIER PROGRESS MATHEMATICS, GRADE 8

Lesson 23
Verify Properties of Reflections and Translations—pp. 204–211

Lesson 24
Verify Properties of Rotations—pp. 212–219

Lesson 25
Understand and Identify Congruent Figures—pp. 220–227

Lesson 26
Reflect and Translate Figures on the Coordinate Plane—pp. 228–235

Lesson 27
Rotate Figures on the Coordinate Plane—pp. 236–243

Lesson 28
Dilate Figures on the Coordinate Plane—pp. 244–251

Lesson 29
Identify Similar Figures—pp. 252–259

Lesson 30
Establish Facts about Parallel Lines and Angles—pp. 260–265

Lesson 31
Establish Facts about Triangles and Angles—pp. 266–275

2.3 Geometry

MATHEMATICS STANDARDS

CC.2.3.8.A.2 Understand and apply congruence and similarity using various tools.

CC.2.3.8.A.3 Apply the concepts of volume of cylinders, cones, and spheres to solve real-world and mathematical problems.

SADLIER PROGRESS MATHEMATICS, GRADE 8

Lesson 32
Understand the Pythagorean Theorem—pp. 276–283

Lesson 33
Understand the Converse of the Pythagorean Theorem—pp. 284–291

Lesson 34
Problem Solving: The Pythagorean Theorem—pp. 292–299

Lesson 35
Calculate Distances in the Coordinate Plane—pp. 300–307

Lesson 36
Learn and Apply Volume Formulas—pp. 308–315

2.4 Measurement, Data, and Probability

MATHEMATICS STANDARDS

(B) Statistics and Probability

CC.2.4.8.B.1 Analyze and/or interpret bivariate data displayed in multiple representations.

CC.2.4.8.B.2 Understand that patterns of association can be seen in bivariate data utilizing frequencies.

SADLIER PROGRESS MATHEMATICS, GRADE 8

Lesson 37
Construct and Interpret Scatter Plots—pp. 322–329

Lesson 38
Fit Linear Models to Data—pp. 330–337

Lesson 39
Problem Solving: Use Linear Models—pp. 338–345

Lesson 40
Analyze Data in Two-Way Tables—pp. 346–353