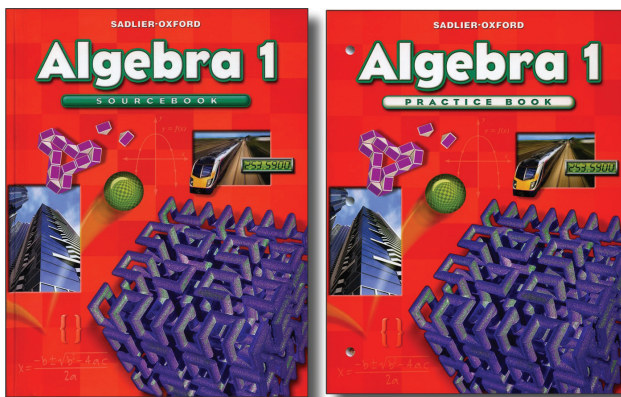


SADLIER

# Algebra 1



Aligned to the

## Georgia

Standards of Excellence 2015-2016

Mathematics

### GSE Algebra 1

#### Contents

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## The Real Number System

N.RN

### ALGEBRA 1 CONTENT STANDARDS

Use properties of rational and irrational numbers.

**MGSE9-12.N.RN.2** Rewrite expressions involving radicals and rational exponents using the properties of exponents.

**MGSE9-12.N.RN.3** Explain why the sum or product of rational numbers is rational; why the sum of a rational number and an irrational number is irrational; and why the product of a nonzero rational number and an irrational number is irrational.

### SADLIER *ALGEBRA 1*

**9-1 Simplify Radical Expressions** — TE pp. 226–227B; SB pp. 226–227 / PB pp. 221–222

**\*1-9A Sums and Products of Rational and Irrational Numbers** — Online

## Quantities

N.Q

### ALGEBRA 1 CONTENT STANDARDS

Reason quantitatively and use units to solve problems.

**MGSE9-12.N.Q.1** Use units of measure (linear, area, capacity, rates, and time) as a way to understand problems:

**MGSE9-12.N.Q.1a** Identify, use, and record appropriate units of measure within context, within data displays, and on graphs;

### SADLIER *ALGEBRA 1*

**2-7 Formulas and Literal Equations** — TE pp. 60–61B; SB pp. 60–61 / PB pp. 51–52

**\*2-7A Dimensional Analysis of Units** — Online

**2-8 Technology: Solve Linear and Literal Equations** — TE pp. 62–63B; SB pp. 62–63 / PB pp. 53–54

**\*4-2A Graphs of Functions** — Online

**5-4 Equations in Point-Slope Form** — TE pp. 126–127B; SB pp. 126–127 / PB pp. 117–118

**5-5 Change the Form of a Linear Equation** — TE pp. 128–131B; SB pp. 128–131 / PB pp. 119–120

**5-7 Graph a Linear Inequality in the Coordinate Plane** — TE pp. 136–137B; SB pp. 136–137 / PB pp. 123–124

**6-1 Solve Systems of Linear Equations Graphically** — TE pp. 150–153B; SB pp. 150–153 / PB pp. 141–144

**6-5 Apply Systems of Linear Equations** — TE pp. 160–161B; SB pp. 160–161 / PB pp. 151–152

**6-6 Graph Systems of Linear Inequalities** — TE pp. 162–165B; SB pp. 162–165 / PB pp. 153–154

**14-4 Histograms** — TE pp. 366–369B; SB pp. 366–369 / PB pp. 365–366



## Quantities

## N.Q

### ALGEBRA 1 CONTENT STANDARDS

### SADLIER *ALGEBRA 1*

**MGSE9-12.N.Q.1b** Convert units and rates using dimensional analysis (English-to-English and Metric-to-Metric without conversion factor provided and between English and Metric with conversion factor);

**MGSE9-12.N.Q.1c** Use units within multi-step problems and formulas; interpret units of input and resulting units of output.

**MGSE9-12.N.Q.2** Define appropriate quantities for the purpose of descriptive modeling. Given a situation, context, or problem, students will determine, identify, and use appropriate quantities for representing the situation.

**14-7 Scatter Plots** — TE pp. 374–377B; SB pp. 374–377 / PB pp. 371–372

**11-1 Ratios and Rates** (converting units/conversion factors) — TE pp. 280–283B; SB pp. 280–283 / PB pp. 277–278

**2-7 Formulas and Literal Equations** — TE pp. 60–61B; SB pp. 60–61 / PB pp. 51–52

**\*2-7A Dimensional Analysis of Units** — Online

**2-8 Technology: Solve Linear and Literal Equations** — TE pp. 62–63B; SB pp. 62–63 / PB pp. 53–54

**\*4-2A Graphs of Functions** — Online

**5-4 Equations in Point-Slope Form** — TE pp. 126–127B; SB pp. 126–127 / PB pp. 117–118

**5-5 Change the Form of a Linear Equation** — TE pp. 128–131B; SB pp. 128–131 / PB pp. 119–120

**5-7 Graph a Linear Inequality in the Coordinate Plane** — TE pp. 136–137B; SB pp. 136–137 / PB pp. 123–124

**6-1 Solve Systems of Linear Equations Graphically** — TE pp. 150–153B; SB pp. 150–153 / PB pp. 141–144

**6-5 Apply Systems of Linear Equations** — TE pp. 160–161B; SB pp. 160–161 / PB pp. 151–152

**6-6 Graph Systems of Linear Inequalities** — TE pp. 162–165B; SB pp. 162–165 / PB pp. 153–154

**14-4 Histograms** — TE pp. 366–369B; SB pp. 366–369 / PB pp. 365–366

**14-7 Scatter Plots** — TE pp. 374–377B; SB pp. 374–377 / PB pp. 371–372

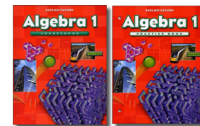
**2-5 Solve Multistep Equations** — TE pp. 54–57B; SB pp. 54–57 / PB pp. 47–48

**6-2 Solve Systems of Linear Equations by Substitution** — TE pp. 154–155B; SB pp. 154–155 / PB pp. 145–146

**7-2 Add and Subtract Polynomials** — TE pp. 178–181B; SB pp. 178–181 / PB pp. 171–172

**10-4 Solve Verbal Problems Involving Quadratic Equations** — TE pp. 258–259B; SB pp. 258–259 / PB pp. 253–254

— continued —



## Quantities

N.Q

ALGEBRA 1 CONTENT STANDARDS

SADLIER *ALGEBRA 1*

**MGSE9-12.N.Q.3** Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. *For example, money situations are generally reported to the nearest cent (hundredth). Also, an answers' precision is limited to the precision of the data given.*

**11-7 Use Trigonometric Ratios to Solve Verbal Problems** — TE pp. 294–297B; SB pp. 294–297 / PB pp. 289–290

**\*11-3A Precision in Measurement** —Online

## Seeing Structure in Expressions

A.SSE

ALGEBRA 1 CONTENT STANDARDS

SADLIER *ALGEBRA 1*

Interpret the structure of expressions.

**MGSE9-12.A.SSE.1** Interpret expressions that represent a quantity in terms of its context.

**MGSE9-12.A.SSE.1a** Interpret parts of an expression, such as terms, factors, and coefficients, in context.

**MGSE9-12.A.SSE.1b** Given situations which utilize formulas or expressions with multiple terms and/or factors, interpret the meaning (in context) of individual terms or factors.

**1-8 Algebraic Expressions** — TE pp. 16–19B; SB pp. 16–19 / PB pp. 15–16

**\*1-8A Interpret Parts of Expressions** —Online

**1-15 Problem-Solving Strategy: Make a Drawing** — TE pp. 34–35B; SB pp. 34–35 / PB pp. 29–30

**2-9 Problem-Solving Strategy: Solve a Simpler Problem** — TE pp. 64–65B; SB pp. 64–65 / PB pp. 55–56

**3-8 Problem-Solving Strategy: Reason Logically** — TE pp. 88–89B; SB pp. 88–89 / PB pp. 79–80

**13-8 Technology: Compare Exponential Growth and Decay** — TE pp. 350–351B; SB pp. 350–351 / PB pp. 347–348

**\*1-8A Interpret Parts of Expressions** —Online

**2-9 Problem-Solving Strategy: Solve a Simpler Problem** — TE pp. 64–65B; SB pp. 64–65 / PB pp. 55–56

**3-8 Problem-Solving Strategy: Reason Logically** — TE pp. 88–89B; SB pp. 88–89 / PB pp. 79–80

**4-6 Problem Solving: Review of Strategies** — TE pp. 110–111B; SB pp. 110–111 / PB pp. 99–100



## Seeing Structure in Expressions

## A.SSE

### ALGEBRA 1 CONTENT STANDARDS

**MGSE9-12.A.SSE.2** Use the structure of an expression to rewrite it in different equivalent forms. For example, see  $x^4 - y^4$  as  $(x^2)^2 - (y^2)^2$ , thus recognizing it as a difference of squares that can be factored as  $(x^2 - y^2)(x^2 + y^2)$ .

Write expressions in equivalent forms to solve problems.

**MGSE9-12.A.SSE.3** Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

**MGSE9-12.A.SSE.3a** Factor any quadratic expression to reveal the zeros of the function defined by the expression.

**MGSE9-12.A.SSE.3b** Complete the square in a quadratic expression to reveal the maximum and minimum value of the function defined by the expression.

### SADLIER *ALGEBRA 1*

**8-1 Common Monomial Factors** — TE pp. 200–201B; SB pp. 200–201 / PB pp. 195–196

**8-3 Factor Trinomials:  $ax^2 + bx + c$ ,  $a \neq 1$**  — TE pp. 206–209B; SB pp. 206–209 / PB pp. 199–200

**8-4 Special Product and Factoring:  $(a \pm b)^2 = a^2 \pm 2ab + b^2$**  — TE pp. 210–211B; SB pp. 210–211 / PB pp. 201–202

**8-5 Special Product and Factoring:  $(a + b)(a - b) = a^2 - b^2$**  — TE pp. 212–213B; SB pp. 212–213 / PB pp. 203–204

**10-3 Solve Quadratic Equations by Factoring** — TE pp. 254–257B; SB pp. 254–257 / PB pp. 249–252

**10-5 Solve Quadratic Equations by Completing the Square** — TE pp. 260–261B; SB pp. 260–261 / PB pp. 255–256

## Arithmetic with Polynomials and Rational Expressions

## A.APR

### ALGEBRA 1 CONTENT STANDARDS

Perform arithmetic operations on polynomials.

**MGSE9-12.A.APR.1** Add, subtract, and multiply polynomials; understand that polynomials form a system analogous to the integers in that they are closed under these operations.

### SADLIER *ALGEBRA 1*

**7-1 Introduction to Polynomials** — TE pp. 176–177B; SB pp. 176–177 / PB pp. 169–170

**7-2 Add and Subtract Polynomials** — TE pp. 178–181B; SB pp. 178–181 / PB pp. 171–172

**7-3 Multiply a Polynomial by a Monomial** — TE pp. 182–183B; SB pp. 182–183 / PB pp. 173–174

**7-4 Model Binomial Multiplication** — TE pp. 184–185B; SB pp. 184–185 / PB pp. 175–176

**7-5 Multiply Binomials** — TE pp. 186–187B; SB pp. 186–187 / PB pp. 177–178

**7-6 Multiply Polynomials** — TE pp. 188–189B; SB pp. 188–189 / PB pp. 179–180

**\*7-8A Set of Polynomials** — Online



## Creating Equations

A.CED

ALGEBRA 1 CONTENT STANDARDS

SADLIER *ALGEBRA 1*

Create equations that describe numbers or relationships.

**MGSE9-12.A.CED.1** Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear, quadratic, ~~simple rational~~, and exponential functions (integer inputs only).

**1-15 Problem-Solving Strategy: Make a Drawing** — TE pp. 34–35B; SB pp. 34–35 / PB pp. 29–30

**2-1 Open Sentences and Solution Sets** — TE pp. 40–41B; SB pp. 40–41 / PB pp. 39–40

**2-2 Solve Addition and Subtraction Equations** — TE pp. 42–45B; SB pp. 42–45 / PB pp. 41–42

**2-3 Solve Multiplication and Division Equations** — TE pp. 46–49B; SB pp. 46–49 / PB pp. 43–44

**2-4 Solve Equations with Two Operations** — TE pp. 50–53B; SB pp. 50–53 / PB pp. 45–46

**2-5 Solve Multistep Equations** — TE pp. 54–57B; SB pp. 54–57 / PB pp. 47–48

**2-6 Solve Absolute-Value Equations** — TE pp. 58–59B; SB pp. 58–59 / PB pp. 49–50

**2-9 Problem-Solving Strategy: Solve a Simpler Problem** — TE pp. 64–65B; SB pp. 64–65 / PB pp. 55–56

**3-1 Write and Graph Inequalities** — TE pp. 70–71B; SB pp. 70–71 / PB pp. 65–66

**3-2 Solve Inequalities Using Addition or Subtraction** — TE pp. 72–73B; SB pp. 72–73 / PB pp. 67–68

**3-3 Solve Inequalities Using Multiplication or Division** — TE pp. 74–75B; SB pp. 74–75 / PB pp. 69–70

**3-4 Solve Multistep Inequalities** — TE pp. 76–79B; SB pp. 76–79 / PB pp. 71–72

**3-5 Solve Compound Inequalities** — TE pp. 80–83B; SB pp. 80–83 / PB pp. 73–74

**10-3 Solve Quadratic Equations by Factoring** — TE pp. 254–257B; SB pp. 254–257 / PB pp. 249–252

**10-4 Solve Verbal Problems Involving Quadratic Equations** — TE pp. 258–259B; SB pp. 258–259 / PB pp. 253–254

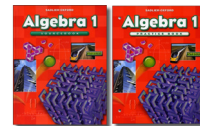
**10-5 Solve Quadratic Equations by Completing the Square** — TE pp. 260–261B; SB pp. 260–261 / PB pp. 255–256

**10-7 Solve Quadratic Equations with the Quadratic Formula** — TE pp. 264–265; SB pp. 264–265 / PB pp. 259–260

**12-8 Solve Rational Equations Resulting in Linear Equations** — TE pp. 320–321B; SB pp. 320–321 / PB pp. 317–318

**12-9 Solve Rational Equations Resulting in Quadratic Equations** — TE pp. 322–323B; SB pp. 322–323 / PB pp. 319–320

— continued —



## Creating Equations

A.CED

ALGEBRA 1 CONTENT STANDARDS

SADLIER *ALGEBRA 1*

**MGSE9-12.A.CED.2** Create linear, quadratic, and exponential equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. (The phrase “in two or more variables” refers to formulas like the compound interest formula, in which  $A = P(1 + r/n)^{nt}$  has multiple variables.)

**13-5 Exponential Growth and Decay** — TE pp. 342–345B; SB pp. 342–345 / PB pp. 341–342

**14-17 Problem Solving: Review of Strategies**— TE pp. 398–399B; SB pp. 398–399 / PB pp. 391–392

**2-7 Formulas and Literal Equations** — TE pp. 60–61B; SB pp. 60–61 / PB pp. 51–52

**3-8 Problem-Solving Strategy: Reason Logically** — TE pp. 88–89B; SB pp. 88–89 / PB pp. 79–80

**4-3 Write Function Rules** — TE pp. 100–101B; SB pp. 100–101 / PB pp. 93–94

**4-4 Arithmetic Sequences** — TE pp. 102–105B; SB pp. 102–105 / PB pp. 95–96

**4-5 Geometric Sequences** — TE pp. 106–109B; SB pp. 106–109 / PB pp. 97–98

**5-2 Direct Variation** — TE pp. 120–121B; SB pp. 120–121 / PB pp. 113–114

**5-3 Equations in Slope-Intercept Form** — TE pp. 122–125B; SB pp. 122–125 / PB pp. 115–116

**5-4 Equations in Point-Slope Form** — TE pp. 126–127B; SB pp. 126–127 / PB pp. 117–118

**5-5 Change the Form of a Linear Equation** — TE pp. 128–131B; SB pp. 128–131 / PB pp. 119–120

**5-8 Absolute-Value Functions** — TE pp. 138–139B; SB pp. 138–139 / PB pp. 125–126

**5-9 Technology: Graph Linear Functions and Inequalities** — TE pp. 140–141B; SB pp. 140–141 / PB pp. 127–128

**5-10 Technology: Families of Lines** — TE pp. 142–143B; SB pp. 142–143 / PB pp. 129–130

**10-1 Identify Quadratic Functions and Their Graphs** — TE pp. 246–249B; SB pp. 246–249 / PB pp. 243–246

**10-2 Graph Quadratic Functions: Parabola** — TE pp. 250–253B; SB pp. 250–253 / PB pp. 247–248

**10-3 Solve Quadratic Equations by Factoring**— TE pp. 254–257B; SB pp. 254–257 / PB pp. 249–252

**10-4 Solve Verbal Problems Involving Quadratic Equations**— TE pp. 258–259B; SB pp. 258–259 / PB pp. 253–254

**10-5 Solve Quadratic Equations by Completing the Square**— TE pp. 260–261B; SB pp. 260–261 / PB pp. 255–256

**10-7 Solve Quadratic Equations with the Quadratic Formula** — TE pp. 264–265; SB pp. 264–265 / PB pp. 259–260

**10-8 Solve Linear-Quadratic Systems** — TE pp. 266–269B; SB pp. 266–269 / PB pp. 261–262

— continued —



## Creating Equations

A.CED

ALGEBRA 1 CONTENT STANDARDS

SADLIER *ALGEBRA 1*

**MGSE9-12.A.CED.3** Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret data points as possible (i.e. a solution) or not possible (i.e. a non- solution) under the established constraints.

**MGSE9-12.A.CED.4** Rearrange formulas to highlight a quantity of interest using the same reasoning as in solving equations.  
*Examples: Rearrange Ohm's law  $V = IR$  to highlight resistance  $R$ ;  
Rearrange area of a circle formula  $A = \pi r^2$  to highlight the radius  $r$ .*

**10-11 Problem-Solving Strategy: Adopt a Different Point of View** — TE pp. 274–275B; SB pp. 274–275 / PB pp. 267–268

**11-9 Problem-Solving Strategy: Guess and Test** — TE pp. 300–301B; SB pp. 300–301 / PB pp. 293–294

**13-1 Inverse Variation** — TE pp. 330–331B; SB pp. 330–331 / PB pp. 331–332

**13-2 Graph Rational Functions** — TE pp. 332–335B; SB pp. 332–335 / PB pp. 333–334

**13-3 Graph Radical Functions** — TE pp. 336–337B; SB pp. 336–337 / PB pp. 335–336

**13-4 Identify Exponential Functions and Their Graphs** — TE pp. 338–341B; SB pp. 338–341 / PB pp. 337–340

**13-6 Technology: Graph Rational Functions** — TE pp. 346–347B; SB pp. 346–347 / PB pp. 343–344

**13-7 Technology: Graph Radical Functions** — TE pp. 348–349B; SB pp. 348–349 / PB pp. 345–346

**14-7 Scatter Plots** — TE pp. 374–377B; SB pp. 374–377 / PB pp. 371–372

**2-6 Solve Absolute-Value Equations** — TE pp. 58–59B; SB pp. 58–59 / PB pp. 49–50

**3-6 Solve Absolute-Value Inequalities** — TE pp. 84–85B; SB pp. 84–85 / PB pp. 75–76

**9-4 Solve Radical Equations** — TE pp. 234–235B; SB pp. 234–235 / PB pp. 227–228

**12-8 Solve Rational Equations Resulting in Linear Equations** — TE pp. 320–321B; SB pp. 320–321 / PB pp. 317–318

**12-9 Solve Rational Equations Resulting in Quadratic Equations** — TE pp. 322–323B; SB pp. 322–323 / PB pp. 319–320

**2-7 Formulas and Literal Equations** — TE pp. 60–61B; SB pp. 60–61 / PB pp. 51–52





## Reasoning with Equations and Inequalities

A.REI

### ALGEBRA 1 CONTENT STANDARDS

Understand solving equations as a process of reasoning and explain the reasoning.

**MGSE9-12.A.REI.1** Using algebraic properties and the properties of real numbers, justify the steps of a simple, one-solution equation. Students should justify their own steps, or if given two or more steps of an equation, explain the progression from one step to the next using properties.

Solve equations and inequalities in one variable.

**MGSE9-12.A.REI.3** Solve linear equations and inequalities in one variable including equations with coefficients represented by letters. For example, given  $ax + 3 = 7$ , solve for  $x$ .

### SADLIER ALGEBRA 1

**\*1-5A Properties of Integer Exponents**—Online  
**1-9 Properties of Real Numbers**—TE pp. 20–21B; SB pp. 20–21 / PB pp. 17–18

**2-2 Solve Addition and Subtraction Equations**—TE pp. 42–45B; SB pp. 42–45 / PB pp. 41–42

**2-3 Solve Multiplication and Division Equations**—TE pp. 46–49B; SB pp. 46–49 / PB pp. 43–44

**2-4 Solve Equations with Two Operations**—TE pp. 50–53B; SB pp. 50–53 / PB pp. 45–46

**2-1 Open Sentences and Solution Sets**—TE pp. 40–41B; SB pp. 40–41 / PB pp. 39–40

**2-2 Solve Addition and Subtraction Equations**—TE pp. 42–45B; SB pp. 42–45 / PB pp. 41–42

**2-3 Solve Multiplication and Division Equations**—TE pp. 46–49B; SB pp. 46–49 / PB pp. 43–44

**2-4 Solve Equations with Two Operations**—TE pp. 50–53B; SB pp. 50–53 / PB pp. 45–46

**2-5 Solve Multistep Equations**—TE pp. 54–57B; SB pp. 54–57 / PB pp. 47–48

**\*2-5A Solve Equations with Letter Coefficients**—Online

**2-7 Formulas and Literal Equations**—TE pp. 60–61B; SB pp. 60–61 / PB pp. 51–52

**2-8 Technology: Solve Linear and Literal Equations**—TE pp. 62–63B; SB pp. 62–63 / PB pp. 53–54

**2-9 Problem-Solving Strategy: Solve a Simpler Problem**—TE pp. 64–65B; SB pp. 64–65 / PB pp. 55–56

**3-3 Solve Inequalities Using Multiplication or Division**—TE pp. 74–75B; SB pp. 74–75 / PB pp. 69–70

**3-4 Solve Multistep Inequalities**—TE pp. 76–79B; SB pp. 76–79 / PB pp. 71–72

**3-7 Technology: Solve Linear Inequalities**—TE pp. 86–87B; SB pp. 86–87 / PB pp. 77–78

**6-9 Problem-Solving Strategy: Work Backward**—TE pp. 170–171B; SB pp. 170–171 / PB pp. 159–160



## Reasoning with Equations and Inequalities

A.REI

### ALGEBRA 1 CONTENT STANDARDS

**MGSE9-12.A.REI.4** Solve quadratic equations in one variable.

**MGSE9-12.A.REI.4a** Use the method of completing the square to transform any quadratic equation in  $x$  into an equation of the form  $(x - p)^2 = q$  that has the same solutions. Derive the quadratic formula from  $ax^2 + bx + c = 0$ .

**MGSE9-12.A.REI.4b** Solve quadratic equations by inspection (e.g., for  $x^2 = 49$ ), taking square roots, factoring, completing the square, and the quadratic formula, as appropriate to the initial form of the equation (limit to real number solutions).

Solve systems of equations.

**MGSE9-12.A.REI.5** Show and explain why the elimination method works to solve a system of two-variable equations.

**MGSE9-12.A.REI.6** Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.

Represent and solve equations and inequalities graphically.

**MGSE9-12.A.REI.10** Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane.

### SADLIER ALGEBRA 1

**10-5 Solve Quadratic Equations by Completing the Square**—  
TE pp. 260–261B; SB pp. 260–261 / PB pp. 255–256

**10-6 The Quadratic Formula and the Discriminant**—TE pp.  
262–263B; SB pp. 262–263 / PB pp. 257–258

**10-3 Solve Quadratic Equations by Factoring**—TE pp. 254–  
257B; SB pp. 254–257 / PB pp. 249–252

**10-5 Solve Quadratic Equations by Completing the Square**—  
TE pp. 260–261B; SB pp. 260–261 / PB pp. 255–256

**10-6 The Quadratic Formula and the Discriminant**—TE pp.  
262–263B; SB pp. 262–263 / PB pp. 257–258

**\*10-6A Complex Roots**—Online

**10-7 Solve Quadratic Equations with the Quadratic  
Formula**—TE pp. 264–265; SB pp. 264–265 / PB pp. 259–260

**\*6-2A Replacing an Equation in a System of Equations**—  
Online

**6-3 Solve Systems of Linear Equations by Elimination**—TE  
pp. 156–157B; SB pp. 156–157 / PB pp. 147–148

**6-4 Solve Equivalent Systems of Linear Equations**—TE pp.  
158–159B; SB pp. 158–159 / PB pp. 149–150

**6-1 Solve Systems of Linear Equations Graphically**—TE pp.  
150–153B; SB pp. 150–153 / PB pp. 141–144

**6-2 Solve Systems of Linear Equations by Substitution**—TE  
pp. 154–155B; SB pp. 154–155 / PB pp. 145–146

**6-3 Solve Systems of Linear Equations by Elimination**—TE  
pp. 156–157B; SB pp. 156–157 / PB pp. 147–148

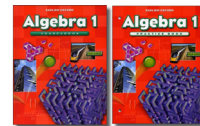
**6-4 Solve Equivalent Systems of Linear Equations**—TE pp.  
158–159B; SB pp. 158–159 / PB pp. 149–150

**6-5 Apply Systems of Linear Equations**—TE pp. 160–161B; SB  
pp. 160–161 / PB pp. 151–152

**6-7 Technology: Graph Systems of Equations**—TE pp. 166–  
167B; SB pp. 166–167 / PB pp. 155–156

**\*4-2A Graphs of Functions**—Online

— continued —



## Reasoning with Equations and Inequalities

A.REI

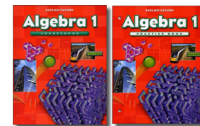
ALGEBRA 1 CONTENT STANDARDS

SADLIER *ALGEBRA 1*

**MGSE9-12.A.REI.11** Using graphs, tables, or successive approximations, show that the solution to the equation  $f(x) = g(x)$  is the  $x$ -value where the  $y$ -values of  $f(x)$  and  $g(x)$  are the same.

**MGSE9-12.A.REI.12** Graph the solution set to a linear inequality in two variables.

- 5-2 Direct Variation** — TE pp. 120–121B; SB pp. 120–121 / PB pp. 113–114
- 5-3 Equations in Slope-Intercept Form** — TE pp. 122–125B; SB pp. 122–125 / PB pp. 115–116
- 5-4 Equations in Point-Slope Form** — TE pp. 126–127B; SB pp. 126–127 / PB pp. 117–118
- 5-5 Change the Form of a Linear Equation** — TE pp. 128–131B; SB pp. 128–131 / PB pp. 119–120
- 5-8 Absolute-Value Functions** — TE pp. 138–139B; SB pp. 138–139 / PB pp. 125–126
- 10-1 Identify Quadratic Functions and Their Graphs** — TE pp. 246–249B; SB pp. 246–249 / PB pp. 243–246
- 10-2 Graph Quadratic Functions: Parabola** — TE pp. 250–253B; SB pp. 250–253 / PB pp. 247–248
- 13-1 Inverse Variation** — TE pp. 330–331B; SB pp. 330–331 / PB pp. 331–332
- 13-2 Graph Rational Functions** — TE pp. 332–335B; SB pp. 332–335 / PB pp. 333–334
- 13-3 Graph Radical Functions** — TE pp. 336–337B; SB pp. 336–337 / PB pp. 335–336
- 13-4 Identify Exponential Functions and Their Graphs** — TE pp. 338–341B; SB pp. 338–341 / PB pp. 337–340
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- 5-1 Identify Linear Functions and Their Graphs** — TE pp. 116–119B; SB pp. 116–119 / PB pp. 109–112
- 5-2 Direct Variation** — TE pp. 120–121B; SB pp. 120–121 / PB pp. 113–114
- 6-1 Solve Systems of Linear Equations Graphically** — TE pp. 150–153B; SB pp. 150–153 / PB pp. 141–144
- \*6-1A Solve Systems of Linear Equations Using Successive Approximations** — Online
- 6-7 Technology: Graph Systems of Equations** — TE pp. 166–167B; SB pp. 166–167 / PB pp. 155–156
- 13-4 Identify Exponential Functions and Their Graphs** — TE pp. 338–341B; SB pp. 338–341 / PB pp. 337–340
- \*13-4B Solve Systems of Exponential Equations** — Online
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- 5-7 Graph a Linear Inequality in the Coordinate Plane** — TE pp. 136–137B; SB pp. 136–137 / PB pp. 123–124
- 6-6 Graph Systems of Linear Inequalities** — TE pp. 162–165B; SB pp. 162–165 / PB pp. 153–154
- 6-8 Technology: Graph Systems of Inequalities** — TE pp. 168–169B; SB pp. 168–169 / PB pp. 157–158



## Interpreting Functions

F.IF

### ALGEBRA 1 CONTENT STANDARDS

Understand the concept of a function and use function notation.

**MGSE9-12.IF.1** Understand that a function from one set (the input, called the domain) to another set (the output, called the range) assigns to each element of the domain exactly one element of the range, i.e. each input value maps to exactly one output value. If  $f$  is a function,  $x$  is the input (an element of the domain), and  $f(x)$  is the output (an element of the range). Graphically, the graph is  $y = f(x)$ .

**MGSE9-12.IF.2** Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.

**MGSE9-12.IF.3** Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. (Generally, the scope of high school math defines this subset as the set of natural numbers 1,2,3,4,...) By graphing or calculating terms, students should be able to show how the recursive sequence  $a_1=7$ ,  $a_n = a_{n-1} + 2$ ; the sequence  $s_n = 2(n-1) + 7$ ; and the function  $f(x) = 2x + 5$  (when  $x$  is a natural number) all define the same sequence.

Interpret functions that arise in applications in terms of the context.

**MGSE9-12.IF.4** Using tables, graphs, and verbal descriptions, interpret the key characteristics of a function which models the relationship between two quantities. Sketch a graph showing key features including: intercepts; interval where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and ~~periodicity~~.

### SADLIER ALGEBRA 1

**4-1 Introduction to Relations**—TE pp. 94–95B; SB pp. 94–95 / PB pp. 89–90

**4-2 Introduction to Functions**—TE pp. 96–99B; SB pp. 96–99 / PB pp. 91–92

**\*4-2A Graphs of Functions**—Online

**4-2 Introduction to Functions**—TE pp. 96–99B; SB pp. 96–99 / PB pp. 91–92

**4-3 Write Function Rules**—TE pp. 100–101B; SB pp. 100–101 / PB pp. 93–94

**4-4 Arithmetic Sequences**—TE pp. 102–105B; SB pp. 102–105 / PB pp. 95–96

**4-5 Geometric Sequences**—TE pp. 106–109B; SB pp. 106–109 / PB pp. 97–98

**13-2 Graph Rational Functions**—TE pp. 332–335B; SB pp. 332–335 / PB pp. 333–334

**13-3 Graph Radical Functions**—TE pp. 336–337B; SB pp. 336–337 / PB pp. 335–336

**13-4 Identify Exponential Functions and Their Graphs**—TE pp. 338–341B; SB pp. 338–341 / PB pp. 337–340

**4-4 Arithmetic Sequences**—TE pp. 102–105B; SB pp. 102–105 / PB pp. 95–96

**4-5 Geometric Sequences**—TE pp. 106–109B; SB pp. 106–109 / PB pp. 97–98

**\*4-5B Features of Functions**—Online

**5-3 Equations in Slope-Intercept Form**—TE pp. 122–125B; SB pp. 122–125 / PB pp. 115–116

**5-4 Equations in Point-Slope Form**—TE pp. 126–127B; SB pp. 126–127 / PB pp. 117–118

— continued —



## Interpreting Functions

F.IF

### ALGEBRA 1 CONTENT STANDARDS

**MGSE9-12.F.IF.5** Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. *For example, if the function  $h(n)$  gives the number of person-hours it takes to assemble  $n$  engines in a factory, then the positive integers would be an appropriate domain for the function.*

**MGSE9-12.F.IF.6** Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.

### SADLIER *ALGEBRA 1*

**5-5 Change the Form of a Linear Equation** — TE pp. 128–131B; SB pp. 128–131 / PB pp. 119–120

**5-6 Parallel and Perpendicular Lines** — TE pp. 132–135B; SB pp. 132–135 / PB pp. 121–122

**5-8 Absolute-Value Functions** — TE pp. 138–139B; SB pp. 138–139 / PB pp. 125–126

**10-1 Identify Quadratic Functions and Their Graphs** — TE pp. 246–249B; SB pp. 246–249 / PB pp. 243–246

**10-2 Graph Quadratic Functions: Parabola** — TE pp. 250–253B; SB pp. 250–253 / PB pp. 247–248

**\*10-2A Features of Quadratic Functions** — Online

**10-10 Technology: Families of Quadratic Functions** — TE pp. 272–273B; SB pp. 272–273 / PB pp. 265–266

**13-2 Graph Rational Functions** — TE pp. 332–335B; SB pp. 332–335 / PB pp. 333–334

**13-3 Graph Radical Functions** — TE pp. 336–337B; SB pp. 336–337 / PB pp. 335–336

**13-4 Identify Exponential Functions and Their Graphs** — TE pp. 338–341B; SB pp. 338–341 / PB pp. 337–340

**\*13-4A Features of Exponential Functions** — Online

**13-8 Technology: Compare Exponential Growth and Decay** — TE pp. 350–351B; SB pp. 350–351 / PB pp. 347–348

**4-1 Introduction to Relations** — TE pp. 94–95B; SB pp. 94–95 / PB pp. 89–90

**4-2 Introduction to Functions** — TE pp. 96–99B; SB pp. 96–99 / PB pp. 91–92

**\*4-5B Features of Functions** — Online

**\*10-2A Features of Quadratic Functions** — Online

**\*13-4A Features of Exponential Functions** — Online

**5-3 Equations in Slope-Intercept Form** — TE pp. 122–125B; SB pp. 122–125 / PB pp. 115–116

**5-4 Equations in Point-Slope Form** — TE pp. 126–127B; SB pp. 126–127 / PB pp. 117–118

**5-5 Change the Form of a Linear Equation** — TE pp. 128–131B; SB pp. 128–131 / PB pp. 119–120

**\*5-6A Average Rate of Change** — Online

**10-1 Identify Quadratic Functions and Their Graphs** — TE pp. 246–249B; SB pp. 246–249 / PB pp. 243–246

**10-2 Graph Quadratic Functions: Parabola** — TE pp. 250–253B; SB pp. 250–253 / PB pp. 247–248



## Interpreting Functions

F.IF

ALGEBRA 1 CONTENT STANDARDS

SADLIER *ALGEBRA 1*

Analyze functions using different representations.

**MGSE9-12.F.IF.7** Graph functions expressed algebraically and show key features of the graph both by hand and by using technology.

**MGSE9-12.F.IF.7a** Graph linear and quadratic functions and show intercepts, maxima, and minima (as determined by the function or by context).

**MGSE9-12.F.IF.7e** Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.

**MGSE9-12.F.IF.8** Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.

**MGSE9-12.F.IF.8a** Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. For example, compare and contrast quadratic functions in standard, vertex, and intercept forms.

**5-2 Direct Variation** — TE pp. 120–121B; SB pp. 120–121 / PB pp. 113–114

**5-3 Equations in Slope-Intercept Form** — TE pp. 122–125B; SB pp. 122–125 / PB pp. 115–116

**5-4 Equations in Point-Slope Form** — TE pp. 126–127B; SB pp. 126–127 / PB pp. 117–118

**5-5 Change the Form of a Linear Equation** — TE pp. 128–131B; SB pp. 128–131 / PB pp. 119–120

**5-10 Technology: Families of Lines** — TE pp. 142–143B; SB pp. 142–143 / PB pp. 129–130

**10-1 Identify Quadratic Functions and Their Graphs** — TE pp. 246–249B; SB pp. 246–249 / PB pp. 243–246

**10-2 Graph Quadratic Functions: Parabola** — TE pp. 250–253B; SB pp. 250–253 / PB pp. 247–248

**\*10-2A Features of Quadratic Functions** — Online

**13-4 Identify Exponential Functions and Their Graphs** — TE pp. 338–341B; SB pp. 338–341 / PB pp. 337–340

**13-4 Identify Exponential Functions and Their Graphs** — TE pp. 338–341B; SB pp. 338–341 / PB pp. 337–340

**\*13-4A Features of Exponential Functions** — Online

**13-8 Technology: Compare Exponential Growth and Decay** — TE pp. 350–351B; SB pp. 350–351 / PB pp. 347–348

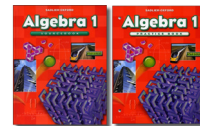
**10-1 Identify Quadratic Functions and Their Graphs** — TE pp. 246–249B; SB pp. 246–249 / PB pp. 243–246

**10-2 Graph Quadratic Functions: Parabola** — TE pp. 250–253B; SB pp. 250–253 / PB pp. 247–248

**10-3 Solve Quadratic Equations by Factoring** — TE pp. 254–257B; SB pp. 254–257 / PB pp. 249–252

**10-4 Solve Verbal Problems Involving Quadratic Equations** — TE pp. 258–259B; SB pp. 258–259 / PB pp. 253–254

**\*10-10B Write a Quadratic Function Rule** — Online



## Interpreting Functions

F.IF

### ALGEBRA 1 CONTENT STANDARDS

**MGSE9-12.F.IF.9** Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a graph of one function and an algebraic expression for another, say which has the larger maximum.*

### SADLIER ALGEBRA 1

- \*5-10A Compare Functions with Different Representations** — Online
- 5-11 Problem-Solving Strategy: Consider Extreme Cases** — TE pp. 144–145B; SB pp. 144–145 / PB pp. 131–132
- 10-2 Graph Quadratic Functions: Parabola** — TE pp. 250–253B; SB pp. 250–253 / PB pp. 247–248
- 10-10 Technology: Families of Quadratic Functions** — TE pp. 272–273B; SB pp. 272–273 / PB pp. 265–266
- \*10-10A Compare Quadratic Functions** — Online
- 13-4 Identify Exponential Functions and Their Graphs** — TE pp. 338–341B; SB pp. 338–341 / PB pp. 337–340

## Building Functions

F.BF

### ALGEBRA 1 CONTENT STANDARDS

Build a function that models a relationship between two quantities.

**MGSE9-12.F.BF.1** Write a function that describes a relationship between two quantities.

### SADLIER ALGEBRA 1

**MGSE9-12.F.BF.1a** Determine an explicit expression and the recursive process (steps for calculation) from context. *For example, if Jimmy starts out with \$15 and earns \$2 a day, the explicit expression “ $2x + 15$ ” can be described recursively (either in writing or verbally) as “to find out how much money Jimmy will have tomorrow, you add \$2 to his total today.”  $J_n = J_{n-1} + 2, J_0 = 15$*

- 1-15 Problem-Solving Strategy: Make a Drawing** — TE pp. 34–35B; SB pp. 34–35 / PB pp. 29–30
- 3-8 Problem-Solving Strategy: Reason Logically** — TE pp. 88–89B; SB pp. 88–89 / PB pp. 79–80
- 4-4 Arithmetic Sequences** — TE pp. 102–105B; SB pp. 102–105 / PB pp. 95–96
- 4-5 Geometric Sequences** — TE pp. 106–109B; SB pp. 106–109 / PB pp. 97–98
- 4-6 Problem Solving: Review of Strategies** — TE pp. 110–111B; SB pp. 110–111 / PB pp. 99–100
- 5-11 Problem-Solving Strategy: Consider Extreme Cases** — TE pp. 144–145B; SB pp. 144–145 / PB pp. 131–132
- 6-9 Problem-Solving Strategy: Work Backward** — TE pp. 170–171B; SB pp. 170–171 / PB pp. 159–160
- 7-9 Problem-Solving Strategy: Find a Pattern** — TE pp. 194–195B; SB pp. 194–195 / PB pp. 185–186

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## Building Functions

F.BF

ALGEBRA 1 CONTENT STANDARDS

SADLIER *ALGEBRA 1*

**MGSE9-12.F.BF.2** Write arithmetic and geometric sequences recursively and explicitly, use them to model situations, and translate between the two forms. Connect arithmetic sequences to linear functions and geometric sequences to exponential functions.

Build new functions from existing functions.

**MGSE9-12.F.BF.3** Identify the effect on the graph of replacing  $f(x)$  by  $f(x) + k$ ,  $k f(x)$ ,  $f(kx)$ , and  $f(x + k)$  for specific values of  $k$  (both positive and negative); find the value of  $k$  given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

**8-9 Problem Solving: Review of Strategies** — TE pp. 220–221B; SB pp. 220–221 / PB pp. 211–212

**9-7 Problem-Solving Strategy: Account for All Possibilities**— TE pp. 240–241B; SB pp. 240–241 / PB pp. 233–234

**\*10-10B Write a Quadratic Function Rule** — Online

**10-11 Problem-Solving Strategy: Adopt a Different Point of View** — TE pp. 274–275B; SB pp. 274–275 / PB pp. 267–268

**13-9 Problem-Solving Strategy: Organize Data**— TE pp. 352–353B; SB pp. 352–353 / PB pp. 349–350

**14-17 Problem Solving: Review of Strategies**— TE pp. 398–399B; SB pp. 398–399 / PB pp. 391–392

**4-4 Arithmetic Sequences** — TE pp. 102–105B; SB pp. 102–105 / PB pp. 95–96

**4-5 Geometric Sequences** — TE pp. 106–109B; SB pp. 106–109 / PB pp. 97–98

**\*4-5A Recursive Formulas for Sequences** — Online

**7-9 Problem-Solving Strategy: Find a Pattern**— TE pp. 194–195B; SB pp. 194–195 / PB pp. 185–186

**5-10 Technology: Families of Lines** — TE pp. 142–143B; SB pp. 142–143 / PB pp. 129–130

**10-2 Graph Quadratic Functions: Parabola** — TE pp. 250–253B; SB pp. 250–253 / PB pp. 247–248

**\*10-2B Even and Odd Functions** — Online

**10-10 Technology: Families of Quadratic Functions** — TE pp. 272–273B; SB pp. 272–273 / PB pp. 265–266

**13-4 Identify Exponential Functions and Their Graphs** — TE pp. 338–341B; SB pp. 338–341 / PB pp. 337–340

**13-6 Technology: Graph Rational Functions**— TE pp. 346–347B; SB pp. 346–347 / PB pp. 343–344

**13-7 Technology: Graph Radical Functions** — TE pp. 348–349B; SB pp. 348–349 / PB pp. 345–346





## Linear, Quadratic, and Exponential Models

F.LE

### ALGEBRA 1 CONTENT STANDARDS

Construct and compare linear, quadratic, and exponential models and solve problems.

**MGSE9-12.F.LE.1** Distinguish between situations that can be modeled with linear functions and with exponential functions.

**MGSE9-12.F.BF.1a** Show that linear functions grow by equal differences over equal intervals and that exponential functions grow by equal factors over equal intervals. (This can be shown by algebraic proof, with a table showing differences, or by calculating average rates of change over equal intervals).

**MGSE9-12.F.LE.1b** Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.

**MGSE9-12.F.LE.1c** Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.

**MGSE9-12.F.LE.2** Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).

### SADLIER ALGEBRA 1

**\*13-5B Identify Linear and Exponential Functions**—Online  
**\*13-5D Growth of Linear, Quadratic, and Exponential Functions**—Online

**\*13-5B Identify Linear and Exponential Functions**—Online

**\*13-5B Identify Linear and Exponential Functions**—Online  
**13-8 Technology: Compare Exponential Growth and Decay**—  
TE pp. 350–351B; SB pp. 350–351 / PB pp. 347–348

**4-4 Arithmetic Sequences**—TE pp. 102–105B; SB pp. 102–105 /  
PB pp. 95–96

**4-5 Geometric Sequences**—TE pp. 106–109B; SB pp. 106–109 /  
PB pp. 97–98

**5-3 Equations in Slope-Intercept Form**—TE pp. 122–125B; SB  
pp. 122–125 / PB pp. 115–116

**5-4 Equations in Point-Slope Form**—TE pp. 126–127B; SB pp.  
126–127 / PB pp. 117–118

**5-6 Parallel and Perpendicular Lines**—TE pp. 132–135B; SB  
pp. 132–135 / PB pp. 121–122

**7-9 Problem-Solving Strategy: Find a Pattern**—TE pp. 194–  
195B; SB pp. 194–195 / PB pp. 185–186

**8-9 Problem Solving: Review of Strategies**—TE pp. 220–221B;  
SB pp. 220–221 / PB pp. 211–212

**9-7 Problem-Solving Strategy: Account for All Possibilities**—  
TE pp. 240–241B; SB pp. 240–241 / PB pp. 233–234

**12-10 Problem Solving: Review of Strategies**—TE pp. 324–  
325B; SB pp. 324–325 / PB pp. 321–322

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## Linear, Quadratic, and Exponential Models

F.LE

### ALGEBRA 1 CONTENT STANDARDS

**MGSE9-12.F.LE.3** Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.

Interpret expressions for functions in terms of the situation they model.

**MGSE9-12.F.LE.5** Interpret the parameters in a linear ( $f(x) = mx + b$ ) and exponential ( $f(x) = a \cdot d^x$ ) function in terms of context. (In the functions above, “m” and “b” are the parameters of the linear function, and “a” and “d” are the parameters of the exponential function.) In context, students should describe what these parameters mean in terms of change and starting value.

### SADLIER *ALGEBRA 1*

**13-5 Exponential Growth and Decay** — TE pp. 342–345B; SB pp. 342–345 / PB pp. 341–342

**\*13-5B Identify Linear and Exponential Functions** — Online

**\*13-5C Compare Linear and Exponential Functions** — Online

**\*13-5D Growth of Linear, Quadratic, and Exponential Functions** — Online

**5-2 Direct Variation** — TE pp. 120–121B; SB pp. 120–121 / PB pp. 113–114

**5-3 Equations in Slope-Intercept Form** — TE pp. 122–125B; SB pp. 122–125 / PB pp. 115–116

**13-5 Exponential Growth and Decay** — TE pp. 342–345B; SB pp. 342–345 / PB pp. 341–342

**\*13-5B Identify Linear and Exponential Functions** — Online

**\*13-5D Growth of Linear, Quadratic, and Exponential Functions** — Online

**\*13-5E Combine Functions** — Online

## Interpreting Categorical and Quantitative Data

S.ID

### ALGEBRA 1 CONTENT STANDARDS

Summarize, represent, and interpret data on a single count or measurement variable.

**MGSE9-12.S.ID.1** Represent data with plots on the real number line (dot plots, histograms, and box plots).

**MGSE9-12.S.ID.2** Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, mean absolute deviation, standard deviation) of two or more different data sets.

**MGSE9-12.S.ID.3** Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).

### SADLIER *ALGEBRA 1*

**\*14-2A Standard Deviation** — Online

**14-4 Histograms** — TE pp. 366–369B; SB pp. 366–369 / PB pp. 365–366

**14-5 Quartiles and Box-and-Whisker Plots** — TE pp. 370–371B; SB pp. 370–371 / PB pp. 367–368

**\*14-2A Standard Deviation** — Online

**\*14-5A Compare Data Sets** — Online

**\*14-5A Compare Data Sets** — Online



## Interpreting Categorical and Quantitative Data

S.ID

### ALGEBRA 1 CONTENT STANDARDS

Summarize, represent, and interpret data on two categorical and quantitative variables.

**MGSE9-12.S.ID.5** Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.

**MGSE9-12.S.ID.6** Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.

**MGSE9-12.S.ID.6a** Decide which type of function is most appropriate by observing graphed data, charted data, or by analysis of context to generate a viable (rough) function of best fit. Use this function to solve problems in context. Emphasize linear, quadratic and exponential models.

**MGSE9-12.S.ID.6c** Using given or collected bivariate data, fit a linear function for a scatter plot that suggests a linear association.

Interpret linear models.

**MGSE9-12.S.ID.7** Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.

**MGSE9-12.S.ID.8** Compute (using technology) and interpret the correlation coefficient “ $r$ ” of a linear fit. (For instance, by looking at a scatterplot, students should be able to tell if the correlation coefficient is positive or negative and give a reasonable estimate of the “ $r$ ” value.) After calculating the line of best fit using technology, students should be able to describe how strong the goodness of fit of the regression is, using “ $r$ ”.

**MGSE9-12.S.ID.9** Distinguish between correlation and causation.

### SADLIER ALGEBRA 1

**\*14-4A Two Way Frequency Tables**—Online

**14-7 Scatter Plots**—TE pp. 374–377B; SB pp. 374–377 / PB pp. 371–372

**\*14-7A Fit a Function to Data**—Online

**14-7 Scatter Plots**—TE pp. 374–377B; SB pp. 374–377 / PB pp. 371–372

**14-7 Scatter Plots**—TE pp. 374–377B; SB pp. 374–377 / PB pp. 371–372

**\*14-7B Correlation Coefficient**—Online

**14-7 Scatter Plots**—TE pp. 374–377B; SB pp. 374–377 / PB pp. 371–372