UNIT 3 • MODELING AND ANALYZING QUADRATIC FUNCTIONS
Lesson 1: Creating and Solving Quadratic Equations in One Variable

Scaffolded Practice 3.1.3

Example 1

Factor $9x^2 - 16$, and then verify your results.

1. Determine any common factors of the given binomial, if common factors exist.

2. Determine if the given binomial meets the conditions of the difference of two squares.

3. Use the pattern $x^2 - y^2 = (x + y)(x - y)$ to factor the given binomial.

4. Multiply the factors to verify that they result in the original binomial.

continued

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Example 2

Factor $5y^2 - 45$, and then verify your results.

Example 3

The polynomial expression $x^2 + 7x - 8$ represents the area in square feet of the Bingham family's rectangular backyard. Factor this polynomial to find the expressions that represent the length and the width of the backyard, and then verify your results.

Example 4

Factor $2a^2 - 16a + 32$, and then verify your results.

Example 5

Factor $x^2 - 18x + 81$, and then verify your results.