

**LESSON**  
**9.3**  
**CONTINUED**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Reteaching with Practice**

For use with pages 511–517

**EXAMPLE 2** *Simplifying with the Quotient Property*

Simplify  $\sqrt{\frac{27}{48}}$ .

**SOLUTION**

$$\sqrt{\frac{27}{48}} = \sqrt{\frac{3 \cdot 9}{3 \cdot 16}} \quad \text{Factor using perfect square factors.}$$

$$= \sqrt{\frac{9}{16}} \quad \text{Divide out common factors.}$$

$$= \frac{\sqrt{9}}{\sqrt{16}} \quad \text{Use quotient property.}$$

$$= \frac{3}{4} \quad \text{Simplify.}$$

**Exercises for Example 2**

Simplify the expression.

5.  $\sqrt{\frac{11}{4}}$

6.  $\sqrt{\frac{1}{100}}$

7.  $\sqrt{\frac{5}{9}}$

8.  $\sqrt{\frac{8}{16}}$

**EXAMPLE 3** *Rationalizing the Denominator*

Simplify  $\sqrt{\frac{5}{2}}$ .

**SOLUTION**

$$\sqrt{\frac{5}{2}} = \frac{\sqrt{5}}{\sqrt{2}} \quad \text{Use quotient property.}$$

$$= \frac{\sqrt{5}}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} \quad \text{Multiply by a value of 1: } \frac{\sqrt{2}}{\sqrt{2}} = 1.$$

$$= \frac{\sqrt{10}}{\sqrt{4}} \quad \text{Use product property.}$$

$$= \frac{\sqrt{10}}{2} \quad \text{Simplify.}$$

**Exercise for Example 3**

Simplify the expression.

9.  $\sqrt{\frac{1}{3}}$

10.  $\sqrt{\frac{2}{7}}$

11.  $\sqrt{\frac{27}{15}}$

12.  $\sqrt{\frac{16}{12}}$