

**guided notes**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Module 17** Simplifying Radical Expressions

**Lesson 3** Multiplying Radicals

**Lesson Objective**

- Multiply radicals.

For nonnegative numbers  $a$  and  $b$ , the Product Property of Square Roots is

\_\_\_\_\_.

For any numbers  $a$  and  $b$ , the Product Property of Cube Roots is

\_\_\_\_\_.

For a nonnegative number  $x$ ,  $\sqrt{x} \cdot \sqrt{x} =$  \_\_\_\_\_.

1 Simplify:  $7\sqrt{30} \cdot 2\sqrt{6}$  \_\_\_\_\_

2 Simplify:  $\sqrt[3]{9k} \cdot \sqrt[3]{6k}$  \_\_\_\_\_

When multiplying radical expressions with a monomial times a binomial, use the distributive property.

3 Simplify:  $\sqrt{6}(3 - \sqrt{3})$  \_\_\_\_\_

4 Simplify:  $\sqrt{2}(\sqrt{3} - \sqrt{32})$  \_\_\_\_\_

When multiplying radical expressions with a binomial times a binomial, the \_\_\_\_\_ method can be used.

5 Simplify:  $(\sqrt{2} + \sqrt{6})^2$  \_\_\_\_\_

6 Simplify:  $(2 + \sqrt{x})(2 - \sqrt{x})$  \_\_\_\_\_



