

**guided notes**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Module 18** Solving Radical Equations  
**Lesson 1** Solving One-Step Radical Equations

**Lesson Objectives**

- Solve one-step radical equations.
- Determine whether a solution is extraneous by checking.

$(\sqrt{x})^2 =$  \_\_\_\_\_

$\sqrt{x^2} =$  \_\_\_\_\_

$(\sqrt[3]{x})^3 =$  \_\_\_\_\_

A radical equation is an equation that has a \_\_\_\_\_ in the radicand.

To solve a radical equation, first rewrite the equation without \_\_\_\_\_. Then, solve the resulting equation.

By squaring both sides of an equation, \_\_\_\_\_ solutions may be generated.

An extraneous solution is a solution that does not satisfy the \_\_\_\_\_ equation. Therefore, an extraneous solution is \_\_\_\_\_ a solution of the equation.

**1** Solve and check:  $\sqrt{x} = 12$ . \_\_\_\_\_

**2** Solve and check:  $\sqrt{x} = 7$ . \_\_\_\_\_

The radical sign indicates the nonnegative square root.

**3** Solve and check:  $\sqrt{x} = -6$ . \_\_\_\_\_

**4** Solve and check:  $-\sqrt{x} = -11$ . \_\_\_\_\_

**5** Solve and check:  $\sqrt[4]{x} = 5$ . \_\_\_\_\_

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