NAME _____   **DATE** _____

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

independent practice

Solve.

1. $\sqrt{x} = 2$ _____

2. $\sqrt{s} = 5$ _____

3. $\sqrt{h} = 16$ _____

4. $\sqrt{k} = 4$ _____

5. $\sqrt{x} = 6$ _____

6. $\sqrt{n} = 9$ _____

7. $-\sqrt{v} = -2$ _____

8. $-\sqrt{v} = 5$ _____

9. $\sqrt{x} = -10$ _____

10. $-\sqrt{a} = -4$ _____

11. $-\sqrt{m} = -0.8$ _____

12. $-\sqrt{f} = -\frac{1}{3}$ _____

13. $\sqrt[3]{x} = 3$ _____

14. $\sqrt[3]{w} = -1$ _____

15. $-\sqrt[3]{n} = -2$ _____

16. $\sqrt[4]{g} = 2$ _____

17. $\sqrt[4]{r} = 4$ _____

18. $\sqrt[4]{t} = -1$ _____

19. $-\sqrt[4]{t} = -3$ _____

20. $\sqrt[3]{p} = \frac{3}{5}$ _____

Journal

1. Jorge is asked for the solution to the equation $\sqrt[4]{w} = -2$. Explain why his solution
$w = -16$ is incorrect.

2. Explain how inverse operations can be used to solve radical equations like
$\sqrt{b} = 4$.

3. For what values of a does the equation $\sqrt{x} = a$ have a solution? Explain.

4. For what values of a does the equation $\sqrt[3]{x} = a$ have a solution? Explain.

5. Rosita solved the equation $\sqrt{x} = -3$ as shown.

$$\sqrt{x} = -3$$
$$\sqrt{x}^2 = -3^2$$
$$x = -9$$

Identify her mistake. How could Rosita have prevented her mistake?

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Cumulative Review

Solve.

1. $\frac{x}{2} = -3$

2. $\frac{3}{x} + \frac{4}{x} = 14$

3. $\frac{4}{5} = \frac{2}{x + 3}$

Simplify.

4. $\frac{4}{x} \cdot \frac{3x}{2}$

5. $\frac{2}{3x} \div \frac{1}{x}$

6. $\frac{1}{3} + \frac{3}{x - 2}$

7. $\sqrt{3} \cdot \sqrt{4}$

8. $\sqrt{6} \cdot \sqrt{3}$

9. $\frac{\sqrt{40}}{\sqrt{10}}$

10. $3\sqrt{3} + 5\sqrt{27}$

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