GUIDED PRACTICE for Examples 4 and 5

Solve the equation. Round the solutions to the nearest hundredth, if necessary.

10. $2(x - 2)^2 = 18$ **11.** $4(q - 3)^2 = 28$ **12.** $3(t + 5)^2 = 24$

13. WHAT IF? In Example 5, suppose the table-tennis ball is released 58 feet above the ground and is caught 12 feet above the ground. Find the amount of time that the ball is in the air. Round your answer to the nearest hundredth of a second.

10.4 EXERCISES

HOMEWORK KEY

- = **WORKED-OUT SOLUTIONS** on p. WS1 for Exs. 25 and 59
- = **TAKS PRACTICE AND REASONING** Exs. 15, 16, 29, 51, 52, 57, 60, 64, and 65
- = **MULTIPLE REPRESENTATIONS** Ex. 62

SKILL PRACTICE

1. VOCABULARY Copy and complete: If $b^2 = a$, then b is a(n) ___?___ of a.

2. WRITING *Describe* two methods for solving a quadratic equation of the form $ax^2 + c = 0$.

EXAMPLES 1 and 2 on pp. 652–653 for Exs. 3–16

SOLVING EQUATIONS **Solve the equation.**

3. $3x^2 - 3 = 0$ **4.** $2x^2 - 32 = 0$ **5.** $4x^2 - 400 = 0$

6. $2m^2 - 42 = 8$ **7.** $15d^2 = 0$ **8.** $a^2 + 8 = 3$

9. $4g^2 + 10 = 11$ **10.** $2w^2 + 13 = 11$ **11.** $9q^2 - 35 = 14$

12. $25b^2 + 11 = 15$ **13.** $3z^2 - 18 = -18$ **14.** $5n^2 - 17 = -19$

15. TAKS REASONING Which of the following is a solution of the equation $61 - 3n^2 = -14$?

(A) 5 (B) 10 (C) 25 (D) 625

16. TAKS REASONING Which of the following is a solution of the equation $13 - 36x^2 = -12$?

(A) $-\frac{6}{5}$ (B) $\frac{1}{6}$ (C) $\frac{5}{6}$ (D) 5

EXAMPLE 3 on p. 653 for Exs. 17–29

APPROXIMATING SQUARE ROOTS **Solve the equation. Round the solutions to the nearest hundredth.**

17. $x^2 + 6 = 13$ **18.** $x^2 + 11 = 24$ **19.** $14 - x^2 = 17$

20. $2a^2 - 9 = 11$ **21.** $4 - k^2 = 4$ **22.** $5 + 3p^2 = 38$

23. $53 = 8 + 9m^2$ **24.** $-21 = 15 - 2z^2$ **25.** $7c^2 = 100$

26. $5d^2 + 2 = 6$ **27.** $4b^2 - 5 = 2$ **28.** $9n^2 - 14 = -3$

29. TAKS REASONING The equation $17 - \frac{1}{4}x^2 = 12$ has a solution between which two integers?

(A) 1 and 2 (B) 2 and 3 (C) 3 and 4 (D) 4 and 5