

# Extra Practice

# 9.2

Name \_\_\_\_\_

In 1–12, solve the equation.

1.  $x^2 = 49$

2.  $x^2 = 64$

3.  $3x^2 = 300$

4.  $8x^2 = 128$

5.  $\frac{1}{3}x^2 = 3$

6.  $\frac{1}{4}x^2 = 9$

7.  $25x^2 = 4$

8.  $x^2 + 11 = 12$

9.  $x^2 - 56 = 25$

10.  $3x^2 + 10 = 37$

11.  $\frac{1}{2}x^2 - 16 = 34$

12.  $4x^2 - 59 = 62$

In 13–24, use a calculator to solve the equation. Round the results to two decimal places.

13.  $x^2 = 35$

14.  $x^2 = 12$

15.  $x^2 + 8 = 13$

16.  $x^2 - 5 = 21$

17.  $x^2 + 20 = 37$

18.  $x^2 - 10 = -3$

19.  $3x^2 - 31 = 2$

20.  $\frac{3}{5}x^2 - 8 = 26$

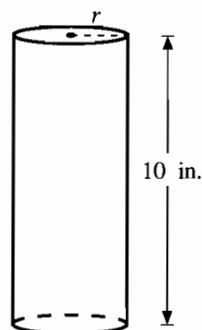
21.  $4x^2 + 8 = 19$

22.  $\frac{1}{2}x^2 + 6 = 9$

23.  $2x^2 - 22 = 51$

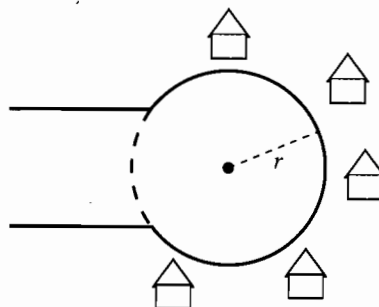
24.  $\frac{1}{5}x^2 - 11 = 13$

25. **Geometry** The volume of a circular cylinder is 175 square inches. Find the radius. (Use  $\pi \approx 3.14$ .)



$$V = \pi r^2 h$$

26. **Geometry** You live on the end of a cul-de-sac. The area of the cul-de-sac is 1017.36 square feet. What is the radius? (Use  $\pi \approx 3.14$ .)



$$A = \pi r^2$$

27. **Dropping a Ball** A ball is dropped from the top of a 300-foot building. How many seconds will it take to hit the ground? ( $h = -16t^2 + s$ )

28. **Eiffel Tower** The Eiffel Tower is 984 feet tall. If you drop a dime from the top of the tower, how many seconds will it take to hit the ground? ( $h = -16t^2 + s$ )

**Inverse Square Law** In 29–30, use the following information.

The intensity,  $I$  (in foot-candles), of light falling on a surface is related to the distance,  $d$  (in feet), between the light source and the surface by

$$d^2 = \frac{1}{I}$$

29. A flashlight shining onto a wall has an intensity of 0.04 foot-candles. How far is the flashlight from the wall?
30. The electricity goes out and you are reading a book by candlelight. The intensity of the light on the page is 9 foot-candles. How many inches is the flame from the book?