

**LESSON**  
**9.4****Practice A**

For use with the lesson "Use Square Roots to Solve Quadratic Equations"

**Evaluate the expression.**

1.  $\sqrt{49}$

2.  $\sqrt{225}$

3.  $\sqrt{100}$

**Isolate the variable in the equation.**

4.  $9x^2 - 18 = 0$

5.  $4x^2 - 12 = 0$

6.  $10x^2 - 40 = 0$

**Solve the equation.**

7.  $x^2 = 36$

8.  $x^2 - 9 = 0$

9.  $5x^2 = 20$

10.  $5x^2 - 45 = 0$

11.  $2x^2 - 18 = 0$

12.  $3x^2 - 12x = 0$

**Evaluate the expression. Round your answer to the nearest hundredth.**

13.  $\sqrt{5}$

14.  $\sqrt{10}$

15.  $\sqrt{12}$

**Solve the equation. Round the solutions to the nearest hundredth.**

16.  $x^2 = 8$

17.  $x^2 - 3 = 0$

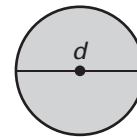
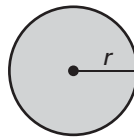
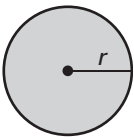
18.  $7x^2 - 14 = 0$

**Use the given area  $A$  of the circle to find the radius  $r$  or the diameter  $d$  of the circle. Round the answer to the nearest hundredth, if necessary.**

19.  $A = 25\pi \text{ m}^2$

20.  $A = 121\pi \text{ in.}^2$

21.  $A = 23\pi \text{ cm}^2$



- 22. Boat Racing** The maximum speed  $s$  (in knots or nautical miles per hour) that some kinds of boats can travel can be modeled by  $s^2 = \frac{16}{9}x$  where  $x$  is the length of the water line in feet. Find the maximum speed of a sailboat with a 20-foot water line. Round your answer to the nearest hundredth.

- 23. Stockpile** You can find the radius  $r$  (in inches) of a cylindrical air compressor receiver tank by using the formula  $c = \frac{1}{73.53}hr^2$  where  $h$  is the height of the tank (in inches) and  $c$  is the capacity of the tank (in gallons). Find the tank radius of each tank in the table. Round your answers to the nearest inch.

| Tank | Height (in.) | Radius (in.) | Capacity (in. <sup>3</sup> ) |
|------|--------------|--------------|------------------------------|
| A    | 24           | ?            | 12                           |
| B    | 36           | ?            | 24                           |
| C    | 48           | ?            | 65                           |