

4.3 Practice B

In Exercises 1–3, determine the number of real solutions of the equation. Then solve the equation using square roots.

1. $x^2 = 121$

2. $x^2 = -15$

3. $x^2 = 196$

In Exercises 4–12, solve the equation using square roots.

4. $x^2 + 9 = 0$

5. $4x^2 - 16 = 0$

6. $-2x^2 + 10 = 10$

7. $5x^2 - 21 = 24$

8. $9x^2 + 7 = 8$

9. $4x^2 - 38 = 43$

10. $(x + 5)^2 = 49$

11. $(4x - 3)^2 = 25$

12. $25(x - 1)^2 = 49$

In Exercises 13–15, solve the equation using square roots. Round your solutions to the nearest hundredth.

13. $2x^2 + 7 = 21$

14. $-16 = 8 - 3x^2$

15. $5 = 9x^2 - 6$

16. Describe and correct the error in solving the equation $x^2 + 25 = 9$ using square roots.

\times $x^2 + 25 = 9$ $x^2 = -16$ $x = \pm 4$

17. A can of juice has a height of 10 inches and a volume of 160π cubic inches. The volume of a can with radius r is given by the formula $V = \pi r^2 h$.

- Write an equation describing this situation, where r is the radius of the can.
- Find the radius of the can.

18. Solve each equation without graphing.

a. $x^2 + 6x + 9 = 25$

b. $x^2 - 10x + 25 = 49$

c. $x^2 - 1 = 24$