

# Extra Practice

# 9.4

Name \_\_\_\_\_

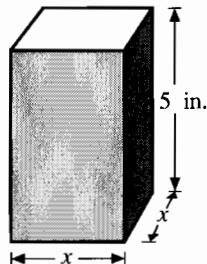
In 1–12, use the quadratic formula to solve the equation.

- |                         |                          |                          |
|-------------------------|--------------------------|--------------------------|
| 1. $x^2 - 8x + 15 = 0$  | 2. $x^2 + 11x + 18 = 0$  | 3. $2x^2 + 3x - 2 = 0$   |
| 4. $4x^2 - 7x + 3 = 0$  | 5. $8x^2 + 26x - 15 = 0$ | 6. $x^2 + 3x - 5 = 0$    |
| 7. $x^2 - 7x + 1 = 0$   | 8. $3x^2 + 8x + 2 = 0$   | 9. $3x^2 + x - 6 = 0$    |
| 10. $2x^2 - 5x - 8 = 0$ | 11. $5x^2 - 3x - 5 = 0$  | 12. $7x^2 - 21x + 8 = 0$ |

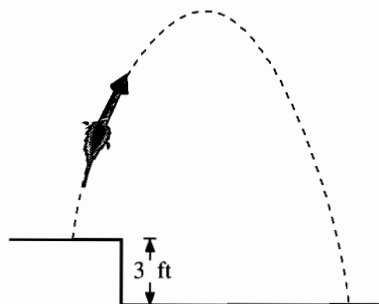
In 13–24, find the  $x$ -intercepts of the graph of the equation.

- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| 13. $y = x^2 + 2x - 8$   | 14. $y = 2x^2 - 5x - 3$  | 15. $y = 6x^2 - x - 12$  |
| 16. $y = x^2 + 2x + 8$   | 17. $y = 3x^2 + 5x + 1$  | 18. $y = 5x^2 + 50x + 1$ |
| 19. $y = 2x^2 - 18x - 3$ | 20. $y = 4x^2 + 11x - 2$ | 21. $y = 2x^2 - x + 13$  |
| 22. $y = x^2 + 3x + 1$   | 23. $y = 7x^2 - 12x + 4$ | 24. $y = 3x^2 + 2x - 34$ |

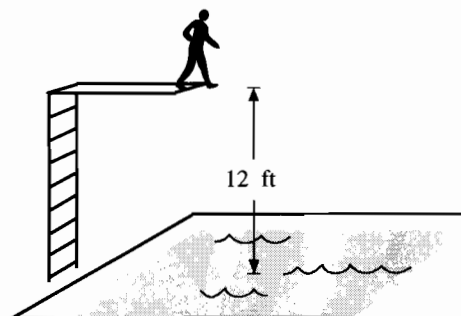
25. **Surface Area** The surface area of a rectangular box with a square base is 112 square inches. The surface area is given by  $A = 2x^2 + 4xh$ . Find  $x$ .



26. **Fireworks** Fireworks are shot upward with an initial velocity of 30 feet per second from a platform 3 feet above the ground. How long will it take the rocket to hit the ground?



27. **Diving Board** A person steps off a 12-foot high diving board with 0 initial velocity. How many seconds does it take the person to hit the water?
28. **Diving Board** A person springs off a 12-foot high diving board with an initial velocity of 15 feet per second. How many seconds does it take the person to hit the water?



29. **Chemistry Experiment** During a chemistry experiment, the cork in a 0.5-foot tall beaker with an effervescent solution pops off with an initial velocity of 20 feet per second. How many seconds does it take for the cork to hit the table?