

Practice B

For use with pages 597–602

Use the zero-product property to solve the equation.

- | | | |
|---|---|-----------------------------|
| 1. $(x + 1)(x + 6) = 0$ | 2. $(t + 4)(t - 4) = 0$ | 3. $(x + 9)(x - 8) = 0$ |
| 4. $(c + 7)(c + 2) = 0$ | 5. $(n - 8)(n - 9) = 0$ | 6. $(x + 4.2)(x - 4.2) = 0$ |
| 7. $(d + \frac{3}{4})(d + \frac{5}{8}) = 0$ | 8. $(x + \frac{1}{2})(x - \frac{1}{2}) = 0$ | 9. $(x + 5.4)(x - 3) = 0$ |
| 10. $5(m + 4)^2 = 0$ | 11. $(x - 3.2)(w - \frac{3}{2}) = 0$ | 12. $(y - 6)(y + 6)^2 = 0$ |

Solve the equation.

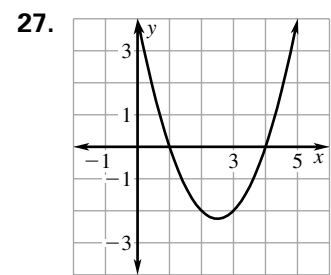
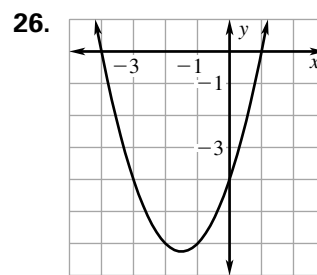
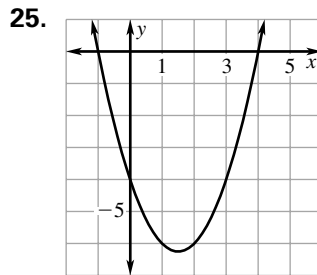
- | | | |
|---------------------------------|--|--|
| 13. $(2x + 8)(x + 7) = 0$ | 14. $(5y - 1)(2y + 4) = 0$ | 15. $(4m + 16)(3m - 18) = 0$ |
| 16. $(2n - 7)(5n + 20) = 0$ | 17. $(2x - 5)(9x - 15) = 0$ | 18. $(7t + 21)(t + 9) = 0$ |
| 19. $(5x + 7)(7x - 15) = 0$ | 20. $(2c + 8)(5c + 10) = 0$ | 21. $(2w - 6.4)(4w - 8.4) = 0$ |
| 22. $(3x + 9.3)(4x - 12.8) = 0$ | 23. $(2x - \frac{1}{2})(2x + \frac{1}{2})^2 = 0$ | 24. $(5n + \frac{1}{3})(3n - \frac{1}{2}) = 0$ |

Match the function with its graph.

A. $y = (x + 4)(x - 1)$

B. $y = (x - 4)(x + 1)$

C. $y = (x - 4)(x - 1)$



Find the x -intercepts and the vertex of the graph of the function. Then sketch the graph of the function.

- | | | |
|---------------------------|---------------------------|--------------------------|
| 28. $y = (x - 4)(x + 2)$ | 29. $y = (x - 6)(x + 4)$ | 30. $y = (x + 1)(x - 5)$ |
| 31. $y = (-x - 6)(x - 6)$ | 32. $y = (x - 3)(-x + 7)$ | 33. $y = (x - 5)(x - 3)$ |

34. A diver jumps from a diving board that is 32 feet above the water. The height of the diver is given by

$$h = -16(t - 2)(t + 1)$$

where the height h is measured in feet, and the time t is measured in seconds. When will the diver hit the water? Can you see a quick way to find the answer? Explain.

