Evaluate the expression for the given value of *x*. *(p. 64)*

1. $-|x| + 9$ when $x = -6$

2. $|-x| + 2.6$ when $x = 2$

3. $0.7 - |x|$ when $x = -0.5$

Solve the equation.

4. $5 - 2a = 13$ *(p. 141)*

5. $13y + 16 - y = 4$ *(p. 148)*

6. $-(w + 1) = w + 3$ *(p. 154)*

Graph the equation. *(pp. 215, 225, 244, 253)*

7. $x = -6$

8. $y = -3x$

9. $y = 6.5x$

10. $y = \frac{4}{3}x - 8$

11. $y = -3x + 9$

12. $y + x = 8$

13. $2y - x = 2$

14. $2x + 5y = -40$

Write an equation of the line that passes through the given point and is perpendicular to the given line. *(p. 319)*

15. $(0, 3)$, $y = -5x + 2$

16. $(2, 2)$, $y = -x - 7$

17. $(8, 3)$, $y = \frac{1}{2}x + 2$

Solve the inequality. Then graph the solution.

18. $m - 8 < -15$ *(p. 356)*

19. $\frac{x}{-3} > 12$ *(p. 363)*

20. $1 - 4n < -11$ *(p. 369)*

21. $5b - 7 \le 7b - 5$ *(p. 369)*

22. $12 < z + 9 \le 16$ *(p. 380)*

23. $4 \le 2c + 7 \le 21$ *(p. 380)*

Solve the linear system. *(pp. 427, 435, 444, 451, 459)*

24. $y = 5x - 4$
$-4x + y = -2$

25. $x - 4y = -44$
$-3x + 12y = 132$

26. $-4x + 7y = -33$
$-3x + 2y = -15$

Simplify the expression.

27. $(-9r)^3$ *(p. 489)*

28. $(2p^4)^3 \cdot p^7$ *(p. 489)*

29. $\dfrac{(3x)^4 y}{xy^3}$ *(p. 495)*

Graph the function.

30. $y = (2.5)^x$ *(p. 520)*

31. $y = (0.8)^x$ *(p. 531)*

32. $y = \frac{1}{2} \cdot \left(\frac{1}{4}\right)^x$ *(p. 531)*

Find the sum or difference. *(p. 554)*

33. $(x^2 - 3x + 8) + (-2x^2 + 15x + 4)$

34. $(5m^2 - 6) - (8m^3 + m^2 - 2m + 11)$

Find the product.

35. $(z + 9)(2z - 7)$ *(p. 562)*

36. $(5b - 2)(8b - 7)$ *(p. 562)*

37. $(q + 2)(-3q^2 + 6q - 1)$ *(p. 562)*

38. $(7 + y)^2$ *(p. 569)*

39. $(2k - 11)^2$ *(p. 569)*

40. $(12w - 5)(12w + 5)$ *(p. 569)*

Factor the expression.

41. $x^2 + 6x - 72$ *(p. 583)*

42. $2m^2 - 5mn - 3n^2$ *(p. 593)*

43. $25d^2 + 60d + 36$ *(p. 600)*

44. $-2a^2 + 50b^2$ *(p. 600)*

45. $z^2(z - 6) + 4(6 - z)$ *(p. 606)*

46. $y^3 + 8y^2 - 9y - 72$ *(p. 606)*