Evaluate the expression. *(p. 8)*

1. $3 \cdot 4^2 - 21$

2. $4 + 4^2 \div 8$

3. $77 \div (11 - 4)$

4. $\frac{1}{2}(8 \cdot 6) - 4^2$

5. $3[50 - (13 - 7)^2]$

6. $\frac{3}{4}[(6 + 4)^2 - 40]$

Check whether the given number is a solution of the equation or inequality. *(p. 21)*

7. $7t - 11 = 52; 9$

8. $3b - 2 = 2b + 3; 4$

9. $8z - 11 > 21; 4$

10. $5a + 3 \leq 13; 2$

11. $5 - y \geq 5; 3$

12. $8x - 15 < 8; 7$

Find the sum or difference.

13. $-2\frac{1}{6} + \left(-4\frac{2}{3}\right)$ *(p. 74)*

14. $2.5 - (-2.05)$ *(p. 80)*

15. $-24.6 - (-5.5)$ *(p. 80)*

Find the product or quotient.

16. $\frac{5}{2}(-8)(-5)$ *(p. 88)*

17. $9 \div \left(-\frac{3}{7}\right)$ *(p. 103)*

18. $-\frac{7}{8} \div \frac{1}{2}$ *(p. 103)*

Evaluate the expression for the given value of the variable(s).

19. $\frac{32}{w} - 2$ when $w = 4$ *(p. 8)*

20. $7 + 3m^2 - 8m$ when $m = 5$ *(p. 8)*

21. $\frac{5y}{32 - y^3}$ when $y = 3$ *(p. 8)*

22. $5.15 + (-h) + 6.6$ when $h = 4.3$ *(p. 74)*

23. $17.4 - |-p|$ when $p = 3.5$ *(p. 80)*

24. $k^2 - 12.2k$ when $k = -1.6$ *(p. 88)*

25. $8.3x - (-y)$ when $x = 6$ and $y = 9$ *(p. 88)*

26. $\frac{y}{5x - y}$ when $x = 2$ and $y = 4$ *(p. 103)*

Solve the equation. Check your solution.

27. $m + 16 = 5$ *(p. 134)*

28. $-4 = \frac{w}{7}$ *(p. 134)*

29. $5 + 3x = 23$ *(p. 141)*

30. $\frac{a}{3} - 4 = 29$ *(p. 141)*

31. $-4 = -2b - 18 + 5b$ *(p. 148)*

32. $\frac{3}{8}(16n + 48) = 72$ *(p. 148)*

33. $-8z + 18 = 2(2z - 9)$ *(p. 154)*

34. $(15c + 30) = \frac{1}{3}(102 - 12c)$ *(p. 154)*

Solve the proportion. *(p. 168)*

35. $\frac{6}{d} = \frac{12}{17}$

36. $\frac{4}{7} = \frac{20}{m}$

37. $\frac{1}{9} = \frac{5}{3x}$

38. $\frac{3}{6h} = \frac{12}{72}$

39. $\frac{2}{11} = \frac{4}{t - 1}$

40. $\frac{12}{a + 1} = \frac{132}{35}$

41. $\frac{w + 2}{8} = \frac{w}{3}$

42. $\frac{4}{9} = \frac{z}{z + 10}$