

EXERCISES

Solve each linear equation for y in terms of x .

1. $x + y = 5$

2. $x - y = 5$

3. $-x + y = -5$

4. $-x - y = 5$

5. $2x + y = 6$

6. $2x - y = -6$

7. $-2x + 2y = 7$

8. $y - 2x = -5$

9. $6x - 3y = 8$

10. $4x - 5y = 20$

11. $x - 5y = 10$

12. $3x - y = 1$

13. $-x + \frac{1}{2}y = 12$

14. $2x - \frac{2}{3}y = 10$

15. $\frac{1}{2}x - \frac{3}{2}y = 6$

Find the solutions for the given values of x .

16. $y = 2x$ for $x = -2, 0, 2$

17. $y = 2x + 3$ for $x = -1, 0, 2$

18. $y = 2x - 3$ for $x = -2, 1, 3$

19. $y = \frac{1}{2}x + 1$ for $x = -2, 0, 1$

20. $y = \frac{2}{3}x - 1$ for $x = -3, 0, 1$

Write each of the equation in functional notation $f(x)$.

21. $y = 2x - 4$

22. $y = -2x + 5$

23. $y = 7 - 8x$

24. $y = -5 + 8x$

25. $x + y = 4$

26. $x - y = 4$

27. $2x + y = 4$

28. $-2x - y = 4$

29. $2x + 2y = 7$

30. $4x - 2y = 3$

Find the value for each function.

31. $f(x) = 3x - 6$

a) $f(-1)$

b) $f(0)$

c) $f(1)$

d) $f(2)$

32. $f(x) = 2 - 5x$

a) $f(-2)$

b) $f(\frac{1}{2})$

c) $f(3)$

d) $f(5)$

33. $p(a) = a^2 - 2a$

a) $p(-\frac{1}{2})$

b) $p(0)$

c) $p(3)$

d) $p(6)$

34. $q(c) = 2c^2 + c - 2$

a) $q(-2)$

b) $q(0)$

c) $q(1)$

d) $q(\frac{1}{2})$

35. $f: x \rightarrow 4x - 5$

a) $f(-3)$

b) $f(-\frac{1}{2})$

c) $f(1)$

d) $f(1\frac{1}{4})$

36. Given $f(x) = 4x - 16$, solve $f(x) = 0$.

37. Given $g(x) = 3 - 4x$, solve $g(x) = 0$.

38. Given $f(x) = 2x - 1$ and $g(x) = x^2$, find $f(1) + g(2)$.

39. Given $f(x) = 3 - 2x$ and $g(x) = 2x - 1$, find $f(2) \cdot g(3)$.

40. Given $f(x) = x^2$ and $g(x) = 3 - 2x$, find $f[g(2)]$ and $g[f(2)]$.

41. If $f(x) = x^2 + 18$ and n is a positive number such that $f(2n) = 2f(n)$, find the value of n .