1.5 Practice - Formulas

Solve each of the following equations for the indicated variable.

1) $ab = c$ for b

2) $g = \frac{h}{i}$ for h

3) $\frac{f}{g}x = b$ for x

4) $p = \frac{3y}{q}$ for y

5) $3x = \frac{a}{b}$ for x

6) $\frac{ym}{b} = \frac{c}{d}$ for y

7) $E = mc^2$ for m

8) $DS = ds$ for D

9) $V = \frac{4}{3}\pi r^3$ for π

10) $E = \frac{mv^2}{2}$ for m

11) $a + c = b$ for c

12) $x - f = g$ for x

13) $c = \frac{4y}{m+n}$ for y

14) $\frac{rs}{a-3} = k$ for r

15) $V = \frac{\pi Dn}{12}$ for D

16) $F = k(R - L)$ for k

17) $P = n(p - c)$ for n

18) $S = L + 2B$ for L

19) $T = \frac{D-d}{L}$ for D

20) $I = \frac{E_a - E_q}{R}$ for E_a

21) $L = L_o(1 + at)$ for L_o

22) $ax + b = c$ for x

23) $2m + p = 4m + q$ for m

24) $q = 6(L - p)$ for L

25) $\frac{k-m}{r} = q$ for k

26) $R = aT + b$ for T

27) $h = vt - 16t^2$ for v

28) $S = \pi rh + \pi r^2$ for h

29) $Q_1 = P(Q_2 - Q_1)$ for Q_2

30) $L = \pi(r_1 + r_2) + 2d$ for r_1

31) $R = \frac{kA(T_1 + T_2)}{d}$ for T_1

32) $P = \frac{V_1(V_2 - V_1)}{g}$ for V_2

33) $ax + b = c$ for a

34) $rt = d$ for r

35) $lwh = V$ for w

36) $V = \frac{\pi r^2 h}{3}$ for h

37) $\frac{1}{a} + b = \frac{c}{a}$ for a

38) $\frac{1}{a} + b = \frac{c}{a}$ for b

39) $at - bw = s$ for t

40) $at - bw = s$ for w

41) $ax + bx = c$ for a

42) $x + 5y = 3$ for x

43) $x + 5y = 3$ for y

44) $3x + 2y = 7$ for x

45) $3x + 2y = 7$ for y

46) $5a - 7b = 4$ for a

47) $5a - 7b = 4$ for b

48) $4x - 5y = 8$ for x

49) $4x - 5y = 8$ for y

50) $C = \frac{5}{9}(F - 32)$ for F

Answers - Formulas

1. $b = \frac{c}{a}$

2. h = gi

3. $x = \frac{\text{gb}}{f}$

4. $y = \frac{\text{pq}}{3}$

5. $x = \frac{a}{3b}$

6. $y = \frac{\text{cb}}{\text{dm}}$

7. $m = \frac{E}{c^2}$

8. $D = \frac{\text{ds}}{S}$

9. $\pi = \frac{3V}{4r^3}$

10. $m = \frac{2E}{v_2}$

11. $c = b - a$

12. x = g + f

13. $y = \frac{\text{cm} + \text{cn}}{4}$

14. $r = \frac{k(a-3)}{5}$

15. $D = \frac{12V}{\pi n}$

16. $k = \frac{F}{R-L}$

17. $n = \frac{P}{p-c}$

18. $L = S - 2B$

19. $D = \text{TL} + d$

20. $E_a = \text{IR} + \text{Eg}$

21. $L_o = \frac{L}{1 + \text{at}}$

22. $x = \frac{c-b}{a}$

23. $m = \frac{p-q}{2}$

24. $L = \frac{q + 6p}{6}$

25. k = qr + m

26. $T = \frac{R-b}{a}$

27. $v = \frac{16t^2 + h}{t}$

28. $h = \frac{s - \pi r^2}{\pi r}$

29. $Q_2 = \frac{Q_1 + \text{PQ}_1}{P}$

30. $r_1 = \frac{L - 2d - \pi r^2}{\pi}$

31. $T_1 = \frac{\text{Rd} - \text{kAT}_2}{\text{kA}}$

32. $v_2 = \frac{\text{Pg} + V_1^2}{V_1}$

33. $a = \frac{c-b}{x}$

34. $r = \frac{d}{t}$

35. $w = \frac{V}{\ell h}$

36. $h = \frac{3v}{\pi r^2}$

37. $a = \frac{c-1}{b}$

38. $b = \frac{c-1}{a}$

39. $t = \frac{5 + \text{bw}}{a}$

40. $w = \frac{\text{at} - s}{b}$

41. $x = \frac{c - \text{bx}}{x}$

42. $x = 3 - 5y$

43. $y = \frac{3-x}{5}$

44. $x = \frac{7 - 2y}{3}$

45. $y = \frac{7 - 3x}{2}$

46. $a = \frac{7b + 4}{5}$

47. $b = \frac{5a - 4}{7}$

48. $x = \frac{8 + 5y}{4}$

49. $y = \frac{4x - 8}{5}$

50. $f = \frac{9c + 160}{5}$