

Number and Algebra
Solving Equations 1

(1) Solve the following equations.

a. $3(x+4) = 27$

b. $4(x-5) = 12$

c. $10 = 5(x-2)$

d. $3(4x-1) = 33$

(2) Solve the following equations.

a. $3x + 5(x-3) = 9$

b. $8y + 6(-y-2) = 16$

c. $6(3-x) - (x-3) = 0$

d. $3(x+2) - 2(2x-1) = 5$

(3) Solve the following equations.

a. $2x + 3 = x + 8$

b. $3x - 1 = x + 7$

c. $13 - 5x = 1 - x$

d. $4x - 1 = 2x + 5$

(4) Solve the following equations.

a. $4(2x-3) = 7(x-1)$

b. $3(x+4) - 4(x-2) = 3x$

c. $4(x-1) = 3(x+3) - (x-9)$

d. $4(3-x) - 5(x-4) = 3(5-x) - 7$

(5) Solve the following equations.

a. $7[x-3(3-x)] = 21$

b. $9 = 2[16 - 4(3-x)]$

c. $4x - [7 - 2(x-1)] = x + 11$

d. $3[3(4-x)+1] = 7[2(3-2x)+5]$

(6) Solve the following equations.

a. $\frac{1}{2}(4-3x) = \frac{1}{3}(3-4x)$

b. $\frac{1}{6}(x-4) - \frac{1}{4}(2-x) = \frac{1}{2}$

c. $\frac{1}{2}(y+4) = y + \frac{1}{8}(4-y)$

d. $\frac{4}{5}x - (-x+5) = -(x-3) - \frac{2}{5}(2+2x)$

(7) Solve the following equations.

a. $\frac{x-1}{3} + \frac{x+1}{4} = \frac{1}{6}$

b. $\frac{2-x}{3} - \frac{x+1}{5} = \frac{1}{3}$

c. $x = 1 + \frac{x+1}{2} + \frac{x+1}{4}$

d. $0.4 - 0.6(x-3) = \frac{1}{3}x - \frac{3}{5}(x-7)$

(8) a. Solve the equation $4(x-2) = 3x+1$.

b. Using the results of a., solve the equation $4[(2y+3)-2] = 3(2y+3)+1$.

(9) a. Solve the equation $8x+7 = 13(x-1)$.

b. Using the results of a., solve the equation $\frac{8}{y} + 7 = 13\left(\frac{1}{y} - 1\right)$.

(10) a. Solve the equation $-\frac{1}{2}(5-x) = 1$.

b. Using the results of a., solve for a in the equation $\frac{a-x}{3} = 5$.