

[solving equations]

1. Solve by inspection:

a. $x + 3.6 = 7.8$

b. $\frac{x}{4} = 12$

2. Solve for x :

a. $8x = 144$

b. $x - 15 = -48$

c. $18 = 5x + 8$

d. $9x - \frac{3}{5} = -\frac{6}{5}$

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

f. $\frac{x}{4} + \frac{4}{2} = 9$

g. $x + 3(x + 1) = 27$

h. $7 - 2(x - 3) = -3$

3. Solve and graph:

a. $-8x - 5 \leq -9x - 8$

b. $-8x > -4 - 6x$

4. Show and state whether or not $x = -4$ is a solution to each of these:

a. $3(2 - x) = x + 2$

b. $4x + 6 = 2x - 2$

5. Solve for x :

a. $11x + 9 = 152$

b. $-40 = -8 + 4x$

c. $\frac{x}{-7} = -8$

d. $5.2 = 3.9 + x$

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

f. $1.21 = 11(0.51 + 0.4x)$

g. $x - 8 = -12x + 31$

h. $11 - 2(5 + 3x) = 2(x - 6) + 14$

i. $\frac{x+5}{3} = \frac{3-x}{7}$

j. $2.4(6.7 + 1.2x) = 24.72$

k. $-\frac{1}{2}(x - 2) + \frac{1}{4} = \frac{2}{5}(2 - x)$

l. $-\frac{3}{2}(7 - 4x) = \frac{2x}{7} - \frac{1}{2}(-3x + 4)$

6. Show whether or not $x = -2$ is a solution for the inequality:

$$3(x - 6) + 2 < 4(x + 2) - 21$$

7. Solve for x : $-P - \frac{x}{Q} = -R$
8. Solve for x : $(x - 2)(x + 3) = x^2 - 5\left(\frac{x}{2} - \frac{3}{2}\right)$
9. Find the value of x when $y = \frac{1}{20}$

$$y = -\frac{3x}{5} - \frac{1}{4}$$

10. Solve and graph the following inequality:

$$\frac{1}{2}(x + 3) - 4 \geq \frac{1}{3}(4 - x) + 7$$

