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Resuelva cada ecuación lineal.

a)  $5 + 6x = 2$

$$6x = 2 - 5$$

$$6x = -3$$

$$x = \frac{-3}{6}$$

$$x = -\frac{1}{2}$$

e)  $5 - 2x = 9$

$$-2x = 9 - 5$$

$$-2x = 4$$

$$x = \frac{4}{-2}$$

$$x = -2$$

b)  $4b + 1 = -18$

$$4b = -18 - 1$$

$$4b = -19$$

$$b = \frac{-19}{4}$$

f)  $-3x + 1 = 4$

$$-3x = 4 - 1$$

$$-3x = 3$$

$$x = \frac{3}{-3}$$

$$x = -1$$

c)  $18x - 3 = 0$

$$18x = 0 + 3$$

$$18x = 3$$

$$x = \frac{3}{18}$$

$$x = \frac{1}{6}$$

g)  $-2 - 5x = 0$

$$-5x = 0 + 2$$

$$-5x = 2$$

$$x = (-2) / (5)$$

$$x = -\frac{2}{5}$$

d)  $5y + 1 = 6$

$$5y = 6 - 1$$

$$5y = 5$$

$$y = 5/5$$

$$y = 1$$

h)  $x = 6 - x$

$$x = -x + 6$$

$$x + x = -x + 6 + x$$

$$2x = -x + 6 + x$$

$$2x = 6$$

$$x = 6 \div 2$$

$$x = 3$$

$$\begin{aligned}
 i) \quad 5 &= -9 - x \\
 5 + 9 &= -x \\
 14 &= -x \\
 x &= \frac{-14}{1} \\
 x &= -14
 \end{aligned}$$

$$\begin{aligned}
 j) \quad 5x - 9 &= 3x + 5 \\
 5x &= 3x + 5 + 9 \\
 5x &= 3x + 14 \\
 5x - 3x &= 14 \\
 2x &= 14 \\
 x &= \frac{14}{2} \\
 x &= 7
 \end{aligned}$$

$$\begin{aligned}
 k) \quad 2k + 7 &= 12 - 3k \\
 2k &= 12 - 3k - 7 \\
 2k &= -3k + 5 \\
 2k + 3k &= 5 \\
 5k &= 5 \\
 k &= \frac{5}{5} \\
 k &= 1
 \end{aligned}$$

$$\begin{aligned}
 l) \quad 10 - 4x &= 7 - 6x \\
 -4x + 10 &= -6x + 7 \\
 -4x &= -6x + 7 - 10 \\
 -4x &= -6x - 3 \\
 -4x + 6x &= -3 \\
 2x &= -3 \\
 x &= \frac{-3}{2} \\
 x &= -\frac{3}{2}
 \end{aligned}$$

$$\begin{aligned}
 m) \quad 2 + 3x &= 8 - x \\
 3x + 2 &= -x + 8 \\
 3x &= -x + 8 - 2 \\
 3x &= -x + 6 \\
 3x + x &= 6 \\
 4x &= 6 \\
 x &= \frac{6}{4} \\
 x &= \frac{3}{2}
 \end{aligned}$$

$$\begin{aligned}
 n) \quad -3x + 5 &= 4 - x \\
 -3x + 5 &= -x + 4 \\
 -3x &= -x + 4 - 5 \\
 -3x &= -x - 1 \\
 -3x + x &= -1 \\
 -2x &= -1 \\
 x &= \frac{-1}{-2} \\
 x &= \frac{1}{2}
 \end{aligned}$$



$$0) \quad 4 - 2x = x - 5$$

$$- 2x + x = x - 5$$

$$- 2x = x - 5 - 4$$

$$- 2x = x - 9$$

$$- 2x - x = - 9$$

$$- 3x = - 9$$

$$x = - 9 / - 3$$

$$x = 3$$

$$x = 3$$

## Ejercicios de ecuaciones cuadráticas

1.  $x^2 - 5x + 6 = 0$

$$x = \frac{-(-5) \pm \sqrt{(-5)^2 - (4)(1)(6)}}{(2)(1)}$$

$$x = \frac{5 \pm \sqrt{25 - 24}}{2}$$

$$x = \frac{5 \pm \sqrt{1}}{2}$$

$$x = \frac{5 \pm 1}{2}$$

$$x_1 = \frac{5 + 1}{2} \quad x_2 = \frac{5 - 1}{2}$$

$$x_1 = \frac{6}{2} \quad x_2 = \frac{4}{2}$$

$$x_1 = 3 \quad x_2 = 2$$



$$2. \quad 2x^2 - 7x + 3 = 0$$

$$x = \frac{-(-7) \pm \sqrt{(-7)^2 - (4)(2)(3)}}{(2)(2)}$$

$$x = \frac{7 \pm \sqrt{49 - 24}}{4}$$

$$x = \frac{7 \pm \sqrt{25}}{4}$$

$$x = \frac{7 \pm \sqrt{5}}{4}$$

$$x = \frac{7 \pm 5}{4}$$

$$x = \frac{7 + 5}{4}$$

$$x = \frac{7 - 5}{4}$$

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

$$x = \frac{2}{4}$$

$$x = 3$$

$$x = \frac{1}{2}$$

## Suma de Polinomios

1.  $P(x) = 2x^3 + 5x - 3$ ,  $Q(x) = 4x - 3x^2 + 2x^3$ .

$$\begin{array}{r} 2x^3 + 5x - 3 \\ 2x^3 - 3x^2 + 4x \\ \hline 4x^3 - 3x^2 + 9x - 3 \end{array}$$

2.  $P(x) = 7x^4 + 4x^2 + 7x + 2$ ,  $Q(x) = 6x^3 + 8x + 3$ .

$$\begin{array}{r} 7x^4 + 4x^2 + 7x + 2 \\ 6x^3 + 8x + 3 \\ \hline 7x^4 + 6x^3 + 4x^2 + 15x + 5 \end{array}$$