

Ecuaciones de Primer Grado con una incógnita sin denominadores

- 1) $2x + 1 = 21$
- 2) $7 = x + 3$
- 3) $8x - 5x = x + 8$
- 4) $3x = 9x + 12$
- 5) $3x + 6 = 2x + 13$
- 6) $5x - 7 = 2 - 4x$
- 7) $5x - 8 + 2x = 7 + 4x - 9$
- 8) $3x + x + 4 = 2x + 30$
- 9) $4x + 7 - x = 5 + 2x$
- 10) $4 - 2x + 13 = 10 - 9x + 7$
- 11) $7x - 10 + x - 2 = 6x - 3 + 3x - 1$
- 12) $5x - 7 + 2x = 3x - 3 + 4x - 5 + x$
- 13) $(x - 5) - (4x + 7) = 6 + 3x$
- 14) $13 - (x + 5) = 4x - (6x - 5)$
- 15) $3(4x - 1) - 2(5x - 3) + 3x = -11 - 2x$
- 16) $7x - 2(5 - x) = 3 + 2x + 1$
- 17) $3(x - 2) - 5(2x - 1) + 2(3x + 4) + 10 = -x$
- 18) $5x - 3(2x - 1) = 1 - 4(x - 2)$
- 19) $3(4x - 1) - 2(5x - 3) = 11 - 2x + 16$
- 20) $5(2 - 2x) + 3(x - 6) = 16 - 4(6 + 2x) + x$
- 21) $(2x - 1) - (x - 7) = 2$
- 22) $3(3x - 2) - 7x - 1 = 6(2x - 7) - 15x$

Resolución de Ecuaciones sin denominadores

1) $2x + 1 = 21$

$$\begin{aligned} 2x &= 21 - 1 \\ 2x &= 20 \\ x &= \underline{20} \\ &\quad 2 \end{aligned}$$

x = 10

2) $7 = x + 3$

$$\begin{aligned} -x &= 3 - 7 \\ -x &= -4 \\ x &= \underline{-4} \end{aligned}$$

x = 4

3) $8x - 5x = x + 8$

$$\begin{aligned} 8x - 5x - x &= 8 \\ 2x &= 8 \\ x &= \underline{8} \\ &\quad 2 \end{aligned}$$

x = 4

4) $3x = 9x + 12$

$$\begin{aligned} 3x - 9x &= 12 \\ -6x &= 12 \\ x &= \underline{-12} \\ &\quad -6 \end{aligned}$$

x = -2

5) $3x + 6 = 2x + 13$

$$\begin{aligned} 3x - 2x &= 13 - 6 \\ x &= 7 \end{aligned}$$

x = 7

6) $5x - 7 = 2 - 4x$

$$\begin{aligned} 5x + 4x &= 2 + 7 \\ 9x &= 9 \\ x &= \underline{9} \\ &\quad 9 \end{aligned}$$

x = 1

7) $5x - 8 + 2x = 7 + 4x - 9$

$$5x + 2x - 4x = 7 - 9 + 8$$

$$3x = 6$$

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

x = 2

8) $3x + x + 4 = 2x + 30$

$$3x + x - 2x = 30 - 4$$

$$2x = 26$$

$$x = \frac{26}{2}$$

x = 13

9) $4x + 7 - x = 5 + 2x$

$$4x - x - 2x = 5 - 7$$

$$x = -2$$

x = -2

10) $4 - 2x + 13 = 10 - 9x + 7$

$$-2x + 9x = 10 + 7 - 4 - 13$$

$$7x = 0$$

$$x = \frac{0}{7}$$

x = 0

11) $7x - 10 + x - 2 = 6x - 3 + 3x - 1$

$$7x + x - 6x - 3x = -3 - 1 + 10 + 2$$

$$-x = 8$$

$$x = -8$$

x = -8

12) $5x - 7 + 2x = 3x - 3 + 4x - 5 + x$

$$5x + 2x - 3x - 4x - x = -3 - 5 + 7$$

$$-x = -1$$

$$x = 1$$

x = 1

13) $(x - 5) - (4x + 7) = 6 + 3x$

$$x - 5 - 4x - 7 = 6 + 3x$$

$$x - 4x - 3x = 6 + 5 + 7$$

$$-6x = 18$$

$$x = \frac{-18}{-6}$$

x = -3

14) $13 - (x + 5) = 4x - (6x - 5)$

$$13 - x - 5 = 4x - 6x + 5$$

$$-x - 4x + 6x = 5 - 13 + 5$$

$$x = -3$$

x = -3

15) $3(4x - 1) - 2(5x - 3) + 3x = -11 - 2x$

$$12x - 3 - 10x + 6 + 3x = -11 - 2x$$

$$12x - 10x + 3x + 2x = -11 + 3 - 6$$

$$7x = -14$$

$$x = \frac{-14}{7}$$

x = -2

16) $7x - 2(5 - x) = 3 + 2x + 8$

$$7x - 10 + 2x = 3 + 2x + 8$$

$$7x + 2x - 2x = 3 + 8 + 10$$

$$7x = 21$$

$$x = \frac{21}{7}$$

x = 3

17) $3(x - 2) - 5(2x - 1) + 2(3x + 4) + 10 = -x$

$$3x - 6 - 10x + 5 + 6x + 8 + 10 = -x$$

$$3x - 10x + 6x + x = 6 - 5 - 8 - 10$$

$$0x = -17$$

x = no tiene solución

No tiene solución porque ningún nº multiplicado por 0 da -17

18) $5x - 3(2x - 1) = 1 - 4(x - 2)$

$$5x - 6x + 3 = 1 - 4x + 8$$

$$5x - 6x + 4x = 1 + 8 - 3$$

$$3x = 6$$

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

x = 2

19) $3(4x - 1) - 2(5x - 3) = 11 - 2x + 16$

$$12x - 3 - 10x + 6 = 11 - 2x + 16$$

$$12x - 10x + 2x = 11 + 16 + 3 - 6$$

$$4x = 24$$

$$x = \frac{24}{4}$$

x = 6

20) $5(2 - 2x) + 3(x - 6) = 16 - 4(6 + 2x) + x$

$$10 - 10x + 3x - 18 = 16 - 24 - 8x + x$$

$$- 10x + 3x + 8x - x = 16 - 24 - 10 + 18$$

$$0x = 0$$

Es una identidad

Cualquier nº cumple la igualdad

21) $(2x - 1) - (x - 7) = 2$

$$2x - 1 - x + 7 = 2$$

$$2x - x = 2 + 1 - 7$$

$$x = -4$$

x = -4

22) $3(3x - 2) - 7x - 1 = 6(2x - 7) - 15x$

$$9x - 6 - 7x - 1 = 12x - 42 - 15x$$

$$9x - 7x - 12x + 15x = -42 + 6 + 1$$

$$5x = -35$$

$$x = \frac{-35}{5}$$

x = -7