

ECUACIONES DE PRIMER GRADO

ECUACIONES SENCILLAS

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|----------------------------|--------------------|
| 1) $5x = 20$ | Sol: $x = 4$ |
| 2) $4x = -24$ | Sol: $x = -6$ |
| 3) $-4x = 12$ | Sol: $x = -3$ |
| 4) $-9x = -72$ | Sol: $x = 8$ |
| 5) $-x = 31$ | Sol: $x = -31$ |
| 6) $3x = 0$ | Sol: $x = 0$ |
| 7) $15x = 1$ | Sol: $x = 1/15$ |
| 8) $0x = -13$ | Sol: Incompatible |
| 9) $7x = 14$ | Sol: $x = 2$ |
| 10) $0x = 0$ | Sol: Indeterminada |
| 11) $3x - 1 = 8$ | Sol: $x = 3$ |
| 12) $7 - 3x = 1$ | Sol: $x = 2$ |
| 13) $x - 3 = x + 6$ | Sol: Incompatible |
| 14) $x + 3 - 4x = 0$ | Sol: $x = 1$ |
| 15) $3x - 5 = x + 7 - 12x$ | Sol: $x = 6/7$ |
| 16) $3x - 1 = 2x + 6$ | Sol: $x = 7$ |
| 17) $6x - 1 + 5x = x + 9$ | Sol: $x = 1$ |
| 18) $5x + 3 = 5x + 1$ | Sol: Incompatible |
| 19) $4x - 3 = 4x + 7$ | Sol: Incompatible |

ECUACIONES CON PARÉNTESIS

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| 1) $5x - 2 = 10x - 2 - (x - 7)$ | Sol: $x = -7/4$ |
| 2) $4 - (x - 3) = 5(x - 2) + 9$ | Sol: $x = 4/3$ |
| 3) $4x + 2(x - 7) = 3x + 4$ | Sol: $x = 6$ |
| 4) $2x - 5 = 4 - 3(2x + 6)$ | Sol: $x = -9/8$ |
| 5) $5x + 1 = 5(2 + x) - 3$ | Sol: Incompatible |
| 6) $3x - 5(1 - 6x) + 3(2x + 3) = 0$ | Sol: $x = -4/39$ |
| 7) $4 - (3x + 1) = 5(x + 1) - 3(7x + 4)$ | Sol: $x = -10/13$ |
| 8) $3(x + 1) - 5 = 3x - 2$ | Sol: Indeterminada |
| 9) $2(x - 3) + 5(x + 6) = 23$ | Sol: $x = -1/7$ |

10) $3x - 1 = 6 - (7 - 3x)$	Sol: Indeterminada
11) $6(7 - x) = 8(6 - x)$	Sol: $x = 3$
12) $4(x - 6) = 12 - (x + 3)$	Sol: $x = 33/5$
13) $4(x - 7) = 2(x + 1) - 3x$	Sol: $x = 6$
14) $(2x - 3) + (5x - 7) - (x + 2) - (6x + 5) = 0$	Sol: Incompatible
15) $3x + 8 - 2 = 3(x + 2)$	Sol: Indeterminada
16) $5x - 99 = 8x - 12$	Sol: $x = -29$
17) $3(x + 1) + 2(3x - 7) = 0$	Sol: $x = 11/9$
18) $5x - 2(x + 6) = 3x - 12$	Sol: Indeterminada
19) $5 - (7x + 1) + 3x = 4(3 - x) - 10$	Sol: Indeterminada
20) $2(x + 1) + 2(x + 2) + 2(x + 3) = 24$	Sol: $x = 2$
21) $17x - 11 = -4(x + 23)$	Sol: $x = -27/7$
22) $5(x + 2) = 5x - 10$	Sol: Incompatible
23) $4x - (2x + 15) + (14 - 5x) = 0$	Sol: $x = -1/3$
24) $3 = 2(x + 9) - 10x + 41$	Sol: $x = 7$
25) $5x - 3(x + 1) = 4 - (3x + 19)$	Sol: $x = -12/5$
26) $3x - 2(4x - 11) - (7x + 1) = 1$	Sol: $x = -11/6$
27) $14x + 16 - 3(5 + 4x) = -11$	Sol: $x = -6$
28) $2(x + 2) - 3(x + 2) + 4(x + 2) = 5(x + 2)$	Sol: $x = -2$
29) $4x - 7(2x + 5) = 31x - 6(3 - 2x)$	Sol: $x = -1$

ECUACIONES CON DENOMINADORES

1) $\frac{x}{2} - 6 = 2x$	Sol: $x = -4$
2) $3x - \frac{2}{3} = 3x + 5$	Sol: Incompatible
3) $\frac{x}{4} + 2(x - 1) = 5$	Sol: $x = 28/9$
4) $\frac{x}{3} - 2 = 5(x + 1)$	Sol: $x = -3/2$
5) $\frac{x - 2}{3} + 10 = 5x$	Sol: $x = 2$
6) $4x - \frac{7x}{3} + 12 = x - 6$	Sol: $x = -27$
7) $4x - \frac{1}{2} = \frac{x}{4} + 3$	Sol: $x = 14/15$
8) $\frac{10x - 15}{5} = 2x - 3$	Sol: Indeterminada

$$9) 2(x+3) - \frac{5}{2} = x$$

$$\text{Sol: } x = -7/2$$

$$10) x + 6 - \frac{4x}{3} = x + 2$$

$$\text{Sol: } x = 3$$

$$11) \frac{1}{2} + \frac{x}{4} = 3x - 5$$

$$\text{Sol: } x = 2$$

$$12) \frac{5x-2}{3} + \frac{4x}{3} = \frac{8}{3}$$

$$\text{Sol: } x = 10/9$$

$$13) \frac{4x}{5} - 2 = x - \frac{x+10}{5}$$

$$\text{Sol: Indeterminada}$$

$$14) 8 - \frac{x}{5} + \frac{2x}{5} = \frac{2}{5}$$

$$\text{Sol: } x = -38$$

$$15) 5x - \frac{6x-1}{4} = 0$$

$$\text{Sol: } x = -1/4$$

$$16) 3x - \frac{3}{8} + \frac{3x-5}{2} = 1$$

$$\text{Sol: } x = 31/36$$

$$17) \frac{2x+5}{3} + \frac{x}{6} = x - \frac{x-10}{6}$$

$$\text{Sol: Indeterminada}$$

$$18) x - \frac{1}{2} = 3x + 8$$

$$\text{Sol: } x = -17/4$$

$$19) \frac{x-3}{5} = 4(x+7)$$

$$\text{Sol: } x = -143/19$$

$$20) 5 - (2x+3) = \frac{x}{2}$$

$$\text{Sol: } x = 4/5$$

$$21) 3(2x-5) + 6 - (2x+7) = \frac{1}{2}$$

$$\text{Sol: } x = 33/8$$

$$22) \frac{2(x+3)}{3} - 1 = \frac{3(x-6)}{4} + 4$$

$$\text{Sol: } x = 18$$

$$23) \frac{5x-2}{4} - \frac{x+3}{6} = x + 5$$

$$\text{Sol: } x = 37/3$$

$$24) \frac{3x+7}{2} - 2 = \frac{2x+1}{4} + x$$

$$\text{Sol: Incompatible}$$

$$25) \frac{x}{4} - \frac{x}{3} + \frac{5x}{6} = \frac{1}{2} - (x+2)$$

$$\text{Sol: } x = -6/7$$

$$26) \frac{3x+1}{2} - \frac{2(x+7)}{6} - 2 = x + 3$$

$$\text{Sol: } x = 41$$

$$27) 3x - \frac{5+6x}{2} = 1$$

$$\text{Sol: Incompatible}$$

$$28) \frac{x}{2} + \frac{x}{3} + \frac{x}{4} - \frac{3x-1}{6} = 0$$

$$\text{Sol: } x = -2/7$$

$$29) 5x - 3\left(\frac{1}{2} - 4x\right) = 8x$$

$$\text{Sol: } x = 1/6$$

$$30) \frac{2}{3}(x-6) = \frac{5x}{12}$$

$$\text{Sol: } x = 16$$

$$31) \frac{x+1}{6} = 6x+4$$

$$\text{Sol: } x = -23/35$$

$$32) 7x - \frac{3x-8}{5} = \frac{3x+9}{4}$$

$$\text{Sol: } x = 13/113$$

$$33) \frac{4-x}{5} - 1 = 6 - \frac{2x+3}{5}$$

$$\text{Sol: } x = 28$$

$$34) 3x - \frac{6x}{5} - \frac{2x+3}{5} = 0$$

$$\text{Sol: } x = 3/7$$

$$35) 5(2x-6) - 1 - \frac{7x-3}{2} = 5 + 7x$$

$$\text{Sol: } x = -69$$

$$36) \frac{3x}{5} - \frac{3(7-5x)+2}{4} = -\frac{x+2}{10} + x$$

$$\text{Sol: } x = 37/23$$

$$37) \frac{6(x-1)}{5} - \frac{3}{4} = \frac{1}{2} \cdot (5x-6)$$

$$\text{Sol: } x = 21/26$$

$$38) 3\left(x - \frac{5}{2}\right) + 9 = \frac{3x}{4}$$

$$\text{Sol: } x = -2/3$$

$$39) \frac{2(5x-7)}{3} + \frac{2}{5} = \frac{x-7}{6}$$

$$\text{Sol: } x = 93/95$$

$$40) 9x - \frac{7x+1}{2} - \frac{x+4}{6} = 0$$

$$\text{Sol: } x = 7/32$$

$$41) 7x - 3(2x+7) + \frac{2}{3}\left(\frac{x-1}{2}\right) = 1$$

$$\text{Sol: } x = 67/4$$

$$42) \frac{2}{5}\left(x + \frac{x-2}{3}\right) - 6x = 3x - \frac{5x}{6}$$

$$\text{Sol: } x = -8/229$$

$$43) 2\left(\frac{5x}{3} - 4\right) = 3x - \frac{1}{4}\left(5x - \frac{4}{3}\right)$$

$$\text{Sol: } x = 100/19$$

$$44) 4 - \frac{2x-5}{3} = (-2)\left(x - \frac{3}{5}\right)$$

$$\text{Sol: } x = -67/20$$

$$45) \frac{x-1}{5} - \frac{x+2}{10} + \frac{1-3x}{15} = \frac{x+2}{30}$$

$$\text{Sol: } x = -3$$

$$46) 2x - \frac{1-3x}{10} + \frac{2}{3} = 2(x-3) + \frac{1}{5}$$

$$\text{Sol: } x = -191/9$$

$$47) \frac{3x+4}{5x+6} = \frac{1}{2}$$

$$\text{Sol: } x = -2$$

$$48) \frac{2(x-1)}{3} - \frac{x+4}{15} + 1 = x - \frac{3(x-2)}{5}$$

$$\text{Sol: } x = 17/3$$

$$49) \frac{\frac{3x-1}{5} - \frac{1}{2} + x}{2} = \frac{1}{3} + 2x$$

$$\text{Sol: } x = -41/72$$

$$50) \frac{x-4}{5} + \frac{3(x-2)}{15} = \frac{1}{10} - \frac{x-1}{2}$$

$$\text{Sol: } x = 2$$