

Resolver los siguientes sistemas de ecuaciones:

$$\begin{array}{l} 2x - y = 1 \\ 1) \quad x + 3y = 11 \end{array} \quad R = x=2, y=3$$

$$\begin{array}{l} 3x + 5y = 20 \\ 2) \quad 2x - 10y = 0 \end{array} \quad R = x=5, y=1$$

$$\begin{array}{l} 5x - 2y = 11 \\ 3) \quad 3y + x = 9 \end{array} \quad R = x=3, y=2$$

$$\begin{array}{l} 10x + 4y = 3 \\ 4) \quad 20y - 5x = 4 \end{array} \quad R = x=1/5, y=1/4$$

$$\begin{array}{l} 5x - 3y = 16 \\ 5) \quad 2x + 4y = 22 \end{array} \quad R = x=5, y=3$$

$$\begin{array}{l} 5x - 3y = 16 \\ 6) \quad x + 2y = 11 \end{array} \quad R = x=5, y=3$$

$$\begin{array}{l} 4x - 3y = 7 \\ 7) \quad 20x + 5y = 35 \end{array} \quad R = x=7/4, y=0$$

$$5x + 3y = 0$$

$$8) \quad 2x - 4y = 0$$

$$R = x=0, y=0$$

$$3x + 2y = 0$$

$$9) \quad 5x - 3y = 0$$

$$R = x=0, y=0$$

$$4x - 5y = 0$$

$$10) \quad 7x + 2y = 0$$

$$R = x=0, y=0$$

$$3x + 5y = 0$$

$$11) \quad 5x + 3y = 0$$

$$R = x=0, y=0$$

$$x - y = 1$$

$$12) \quad \frac{2x}{5} + \frac{3y}{4} = 5$$

$$R = x=5, y=4$$

$$x - 3y = 1$$

$$13) \quad \frac{3x}{4} - y = 2$$

$$R = x=4, y=1$$

$$\frac{x}{y} = \frac{3}{4}$$

$$14) \quad 5x - 4y = -3$$

$$R = x=9, y=12$$

$$\frac{x}{3} + \frac{y}{2} = \frac{4}{3}$$

15) $\frac{x}{y} - \frac{1}{2} = 0$ R= x=1, y=2

$$\frac{x+y}{4} + \frac{x-y}{2} = 3$$

16) $\frac{12x-7y}{13} = 3$ R= x=-1/3, y=-13

$$\frac{x+1}{y} = \frac{1}{4}$$

17) $\frac{x}{y+1} = \frac{1}{5}$ R= x=5, y=24

$$2x + \frac{y-2}{5} = 21$$

18) $4y + \frac{x-4}{6} = 29$ R= x=10, y=7

$$\frac{x+y}{3} + \frac{y-x}{2} = 9$$

19) $\frac{x}{2} + \frac{x+y}{9} = 5$ R= x=6, y=12

$$\frac{x+y}{8} + \frac{x-y}{6} = 5$$

$$20) \frac{x+y}{4} - \frac{x-y}{3} = 10$$

$$R = x=20, y=20$$

$$5(x-2) = y+2$$

$$21) x+5 = 3(y-5)$$

$$R = x=4, y=8$$

$$2(2x+3y) = 3(2x-3y)+10$$

$$22) 4x-3y = 4(6y-2x)+3$$

$$R = x=5/2, y=1$$

$$\frac{x+2}{7} + \frac{x-y}{4} = 2x-3$$

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

$$R = x=24/23, y=148/23$$

$$\frac{13}{x+2y+3} = \frac{3}{4x-5y+6}$$

$$24) \frac{3}{6x-5y+4} = \frac{19}{3x+2y+1}$$

$$R = x=7, y=8$$

$$\frac{5x+7y}{3x+11} = \frac{13}{7}$$

$$25) \frac{11x+27}{7x+5y} = \frac{19}{11}$$

$$R = x=1, y=3$$

$$\frac{1}{x} + \frac{1}{y} = 5$$

$$26) \frac{x}{2} + \frac{y}{3} = 2xy$$

$$R = x=1/3, y=1/2$$

Sistemas de ecuaciones con más tres incógnitas

$$x + y + z = 11$$

$$2x - y + z = 5$$

$$1) 3x + 2y + z = 24$$

$$R = x=4, y=5, z=2$$

$$x - y + z = 7$$

$$x + y - z = 1$$

$$2) y + z - x = 3$$

$$R = x=4, y=2, z=5$$

$$x + y - 2z = 9$$

$$x - y + 4z = 5$$

$$3) 3y - 2x - z = 2$$

$$R = x=11/2, y=13/2, z=3/2$$

$$2x - 2y + 3z = 16$$

$$3x + 5y - 2z = 6$$

$$4) 4x + 3y - 4z = -1$$

$$R = x=3, y=1, z=4$$

$$2x + 7y - 11z = 10$$

$$5x - 10y + 3z = 15$$

$$5) \quad 6x + 12y - z = 31$$

$$R = \quad x=4894/1211, \quad y=701/1211, \\ z=235/1211$$

$$\frac{x + 2y}{5x + 6z} = \frac{7}{9}$$

$$\frac{3y + 4z}{x + 2y} = \frac{8}{7}$$

$$6) \quad x + y + z = 128$$

$$R = x=51, y=76, z=1$$

$$\frac{5x + 7y}{x + y} = 8$$

$$\frac{3(2 - x)}{x - y + z} = 1$$

$$7) \quad \frac{2x + 3y - z}{\frac{x}{z} + 3} = 4$$

$$R = x=54/61, y=-162/61, z=-12/61$$

$$\frac{x}{3} + \frac{y}{5} + \frac{2z}{7} = 68$$

$$\frac{5x}{4} + \frac{y}{6} + \frac{z}{3} = 76$$

$$8) \quad \frac{x}{2} - \frac{y}{5} + \frac{7z}{40} = \frac{147}{5}$$

$$R = \quad x=-744/743, \quad y=27540/743, \\ z=158424/743$$

$$\frac{2}{x} - \frac{1}{y} - \frac{1}{z} = 4$$

$$\frac{3}{x} + \frac{4}{y} - \frac{2}{z} = 11$$

$$9) \frac{3}{x} - \frac{2}{y} + \frac{4}{z} = 11$$

$$R = x=1/3, y=1, z=1$$

$$\frac{1}{x} + \frac{1}{y} = \frac{1}{12}$$

$$10) \frac{1}{y} + \frac{1}{z} = \frac{1}{20}$$

$$\frac{1}{x} + \frac{1}{2} = \frac{1}{15}$$

$$R = x=-30/13, y=60/31, z=-15/7$$

$$\frac{xy}{x+y} = \frac{12}{5}$$

$$11) \frac{yz}{y+z} = \frac{18}{5}$$

$$\frac{xz}{x+z} = \frac{36}{13}$$

$$R = x=4, y=6, z=9$$

$$2x + 3y + 5z = 10$$

$$3x + 7y + 4z = 3$$

$$12) x + 2y + 2z = 3$$

$$R = x=3, y=-2, z=2$$

$$5x - 6y + 4z = 3$$

$$3x - 3y + 2z = 2$$

$$13) 4x - 5y + 2z = 1$$

$$R = x=1, y=1, z=1$$

$$4x - 3y + 2z + 4 = 0$$

$$6x - 2y + 3z + 1 = 0$$

$$14) 5x - 3y + 2z + 3 = 0$$

$$R = x=1, y=2, z=-1$$

$$5x + 2y + 3z + 2 = 0$$

$$2x - 2y + 5z = 0$$

$$15) 3x + 4y + 2z + 10 = 0$$

$$R = x=2, y=-3, z=-2$$

$$2x - 3y + 2 = 2$$

$$3x - 5y + 5z = 3$$

$$16) 5x - 8y + 6z = 5$$

$$R = x=1, y=0, z=0$$

$$4x + 5y + 8z = 7$$

$$2x + 6y + 7z = 25$$

$$17) 23x + 47y + 5z = 81$$

$$R = x=-433/61, y=4015/793,$$

$$z=999/793$$

$$7x + 3y - 4z = 26$$

$$7x + 3y + z = 8$$

$$18) -x + 5y + 4z = 7$$

$$R = x=-31/190, y=807/190, z=-18/5$$

$$9x + 6y + 3z = 12$$

$$4x + 7y + 5z = 15$$

19) $3x + 6y + 7z = 18$

$$R = x = 5/17, y = 10/17, z = 33/17$$