

SISTEMAS DE ECUACIONES LINEALES

- a)
$$\left. \begin{aligned} x - y + 2z &= 6 \\ 2x + y - 3z &= -5 \\ -3x + 6y + 4z &= -1 \end{aligned} \right\}$$
- b)
$$\left. \begin{aligned} x + 3y - z &= 2 \\ 2x - 5y - 4z &= 0 \\ x + 2y + z &= 6 \end{aligned} \right\}$$
- c)
$$\left. \begin{aligned} x + y - z &= 1 \\ x - y + z &= 0 \\ -x + y + z &= 0 \end{aligned} \right\}$$
- d)
$$\left. \begin{aligned} x + 3y - z + t &= 0 \\ 2x + 2y + z + t &= -2 \\ 4x + 3y - z + t &= -3 \\ x + 5y + z - t &= 6 \end{aligned} \right\}$$
- e)
$$\left. \begin{aligned} x + y - z &= 3 \\ 3x + 4y - z &= 5 \\ x + 2y + 3z &= -1 \end{aligned} \right\}$$
- f)
$$\left. \begin{aligned} x - y + z &= 1 \\ 2x + y - z &= 2 \\ 2x + 4y - z &= 5 \end{aligned} \right\}$$
- g)
$$\left. \begin{aligned} x + y + z &= 2 \\ x + 2y - 3z &= 8 \\ x - y + z &= -2 \end{aligned} \right\}$$
- h)
$$\left. \begin{aligned} x - y + 5z &= 13 \\ 3x - 2y + z &= 12 \\ x + y + 2z &= 9 \end{aligned} \right\}$$
- i)
$$\left. \begin{aligned} x + y + z - t &= 4 \\ x - y - z + 2t &= 6 \\ 3x + y + z &= 14 \end{aligned} \right\}$$
- j)
$$\left. \begin{aligned} x + 3y + z &= 0 \\ 2x + 6y - 5z &= 0 \\ 3x + y + z &= 0 \end{aligned} \right\}$$
- k)
$$\left. \begin{aligned} x - 2y + 3z &= 0 \\ 2x - 3z &= 0 \\ 3x - 2y &= 0 \end{aligned} \right\}$$
- l)
$$\left. \begin{aligned} x + y + z + u &= 0 \\ 2x - 3y - z - u &= 0 \\ -x - y + 2z - u &= 0 \\ 2x - 3y + 2z + u &= 0 \end{aligned} \right\}$$
- m)
$$\left. \begin{aligned} x + y + z &= 6 \\ x - y + z &= 2 \\ x + y - z &= 0 \end{aligned} \right\}$$
- n)
$$\left. \begin{aligned} 3x - 2y + 3z &= 2 \\ 4x - 3y + z &= -1 \\ x + 5y - 6z &= 5 \end{aligned} \right\}$$
- ñ)
$$\left. \begin{aligned} x + 2y - 3z &= 1 \\ 2x - y + z &= 2 \\ 3x + y - 2z &= 3 \\ x - 3y + 4z &= 1 \end{aligned} \right\}$$
- o)
$$\left. \begin{aligned} 2x - 3y + 4z &= 1 \\ 3x + 2y - z &= 2 \\ 4x + y + 3z &= 4 \end{aligned} \right\}$$
- p)
$$\left. \begin{aligned} x + 2y - z &= 1 \\ 3x + y + 2z &= 1 \\ 2x - y + 3z &= 0 \end{aligned} \right\}$$
- q)
$$\left. \begin{aligned} 2x - y &= -1 \\ x + 2y &= 2 \\ 3x + y &= 0 \end{aligned} \right\}$$
- r)
$$\left. \begin{aligned} x - y + z &= 0 \\ 2x + 3y - 2z &= 0 \\ 4x + y &= 0 \end{aligned} \right\}$$
- s)
$$\left. \begin{aligned} x - 3y - z &= 1 \\ 2x - 6y - 2z &= 1 \\ 3x - 9y - 3z &= 1 \end{aligned} \right\}$$
- t)
$$\left. \begin{aligned} 6x + 2y + 2z &= 7 \\ 4x - 2y + 8z &= 13 \\ x - y + 2z &= 3 \end{aligned} \right\}$$

SOLUCIONES:

- a) (1,-1,2) b) (-163/6, 11/3, -109/6) c) (1/2, 1/2, 0) d) (-1,1,0,-2) e) (7,-4,0)
 f) (1,1,1) g) (1,2,-1) h) (4,1,2) i) (5-1/2 β, -1-α +3/2 β, α, β) j) (0,0,0)
 k) (3/2 α, 9/4 α, α) l) (0,0,0,0) m) (1,2,3) n) (1,2,1) ñ) $\left(\frac{5+z}{5}, \frac{7z}{5}, z\right)$
 o) (13/33, 23/33, 19/33) p) (-z+1/5, z+2/5, z) q) incompatible r) (-1/5 z, 4/5 z, z)
 s) incompatible t) (1/2, 1/2, 3/2).