

## 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).