

# Sistemas de Inecuaciones

Resuelve

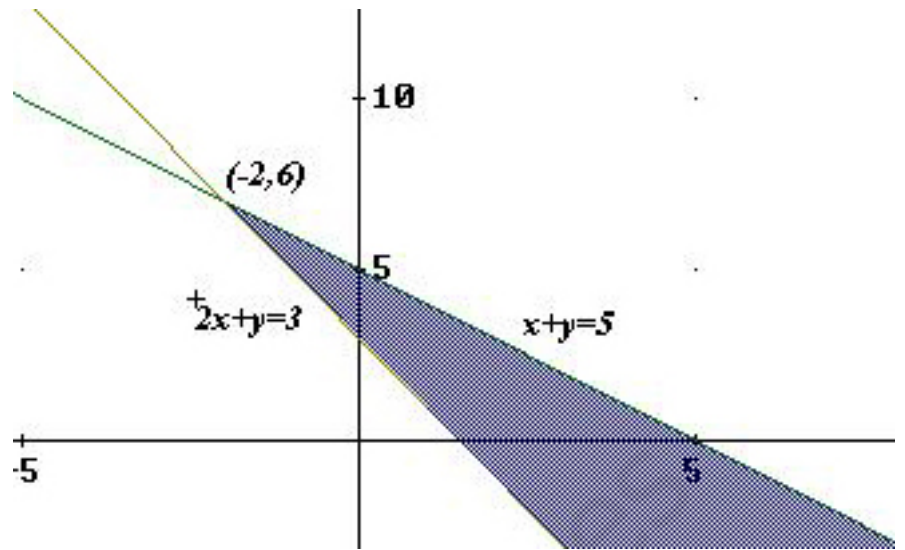
$$\begin{cases} x + y \leq 5 \\ 2x + y \geq 3 \end{cases}$$

Solución:

$$x + y = 5 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 5 \\ 5 & 0 \end{array}$$

$$2x + y = 3 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 3 \\ 3/2 & 0 \end{array}$$

$$\begin{cases} x + y = 5 \\ 2x + y = 3 \end{cases} \Rightarrow \begin{cases} x = -2 \\ y = 6 \end{cases} \Rightarrow (-2, 6)$$



Resuelve

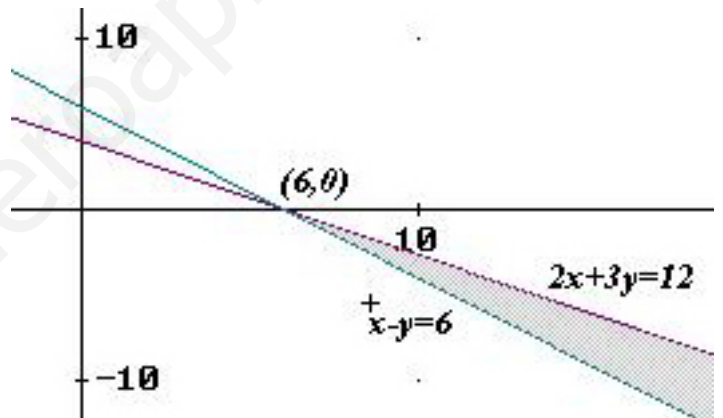
$$\begin{cases} 2x + 3y \leq 12 \\ x - y > 6 \end{cases}$$

Solución:

$$2x + 3y = 12 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 4 \\ 6 & 0 \end{array}$$

$$x - y = 6 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & -6 \\ 6 & 0 \end{array}$$

$$\begin{cases} 2x + 3y = 12 \\ x - y = 6 \end{cases} \Rightarrow \begin{cases} x = 6 \\ y = 0 \end{cases} \Rightarrow (6, 0)$$



Resuelve

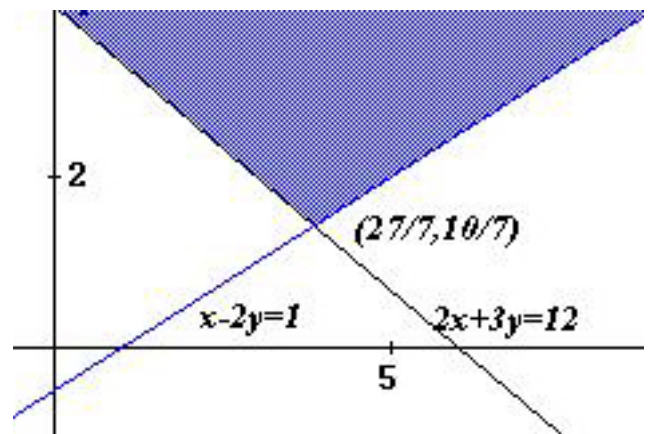
$$\begin{cases} 2x + 3y \geq 12 \\ x - 2y < 1 \end{cases}$$

Solución:

$$2x + 3y = 12 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 4 \\ 6 & 0 \end{array}$$

$$x - 2y = 1 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & -1/2 \\ 1 & 0 \end{array}$$

$$\begin{cases} 2x + 3y = 12 \\ x - 2y = 1 \end{cases} \Rightarrow \begin{cases} x = 27/7 \\ y = 10/7 \end{cases} \Rightarrow (27/7, 10/7)$$



**Resuelve**

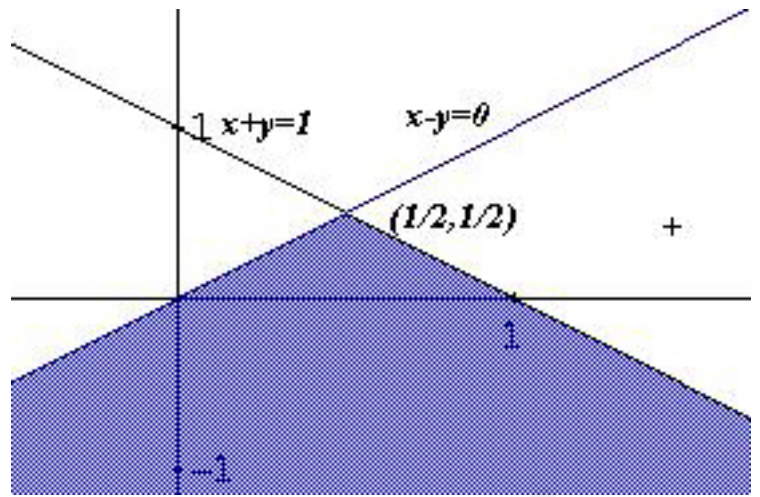
$$\begin{cases} x + y < 1 \\ x - y > 0 \end{cases}$$

**Solución:**

$$x + y = 1 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 1 \\ 1 & 0 \end{array}$$

$$x - y = 0 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 0 \\ 1 & 1 \end{array}$$

$$\begin{cases} x + y = 1 \\ x - y = 0 \end{cases} \Rightarrow \begin{cases} x = 1/2 \\ y = 1/2 \end{cases} \Rightarrow (1/2, 1/2)$$

**Resuelve**

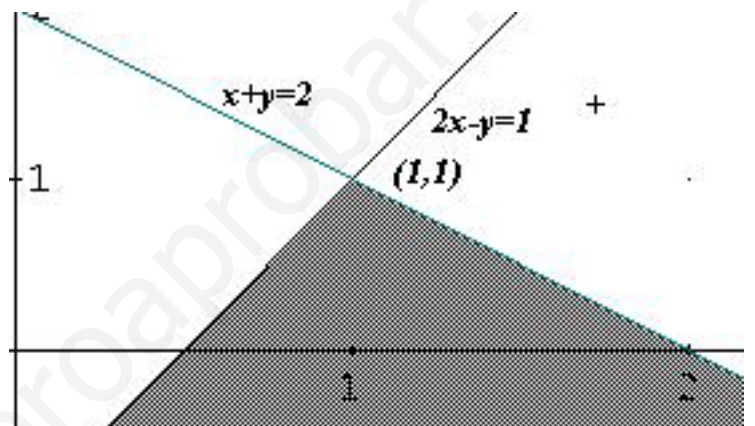
$$\begin{cases} 2x - y > 1 \\ x + y < 2 \end{cases}$$

**Solución:**

$$2x - y = 1 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & -1 \\ 1/2 & 0 \end{array}$$

$$x + y = 2 \Rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 2 \\ 2 & 0 \end{array}$$

$$\begin{cases} 2x - y = 1 \\ x + y = 2 \end{cases} \Rightarrow \begin{cases} x = 1 \\ y = 1 \end{cases} \Rightarrow (1, 1)$$

**Resuelve**

$$1. \begin{cases} x^2 - 2x - 8 \leq 0 \\ \frac{x-1}{x+1} > 0 \end{cases}$$

$$\text{Sol: } [-2, -1) \cup (1, 4]$$

$$2. \begin{cases} x < 3 \\ 2(x-1) < 5(x-1) \end{cases}$$

$$\text{Sol: } (-1, 3)$$

$$3. \begin{cases} 5 \cdot \frac{x-1}{2} \leq 3(x-1) \\ x < -2 \end{cases}$$

$$\text{Sol: } \phi$$