

Boletín Sist. Ecuac. II - Lineales – Matemáticas 3º E.S.O.

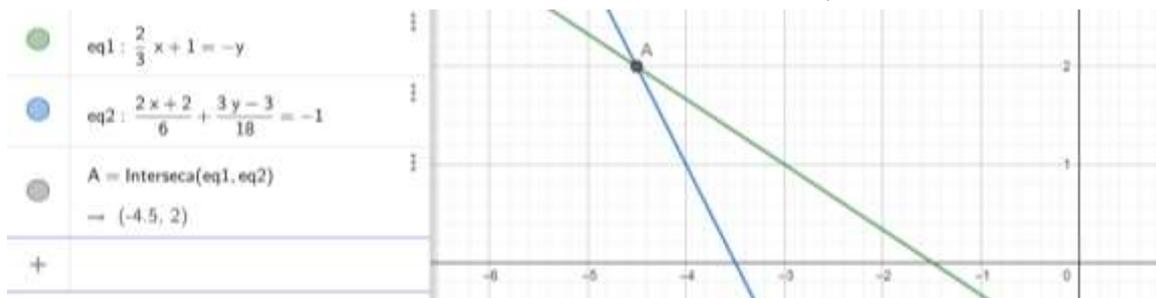
Ejemplo

$$\left. \begin{array}{l} \frac{2}{3}x + 1 = -y \\ \frac{2x+2}{6} + \frac{3y-3}{18} = -1 \end{array} \right\} \xrightarrow{\text{Operamos hasta obtener un Sistema sencillo.}} \left. \begin{array}{l} \frac{2x}{3} + \frac{3}{3} = \frac{-3y}{3} \\ \frac{6x+6}{18} + \frac{3y-3}{18} = \frac{-18}{18} \end{array} \right\} \rightarrow \left. \begin{array}{l} 2x+3 = -3y \\ 6x+6+3y-3 = -18 \end{array} \right\}$$

$$\left. \begin{array}{l} 2x+3y = -3 \\ 6x+3y = -18+3-6 \end{array} \right\} \rightarrow \left. \begin{array}{l} 2x+3y = -3 \\ 6x+3y = -21 \end{array} \right\} \xrightarrow{\text{Resolvemos por el método que estimemos oportuno. En este caso IGUALACIÓN.}} \left. \begin{array}{l} y = \frac{-3-2x}{3} \\ y = \frac{-21-6x}{3} \end{array} \right\} \Rightarrow$$

$$\Rightarrow \frac{-3-2x}{3} = \frac{-21-6x}{3} \rightarrow -3-2x = -21-6x \rightarrow -2x+6x = -21+3 \rightarrow 4x = -18 \rightarrow$$

$$\rightarrow x = \frac{-18}{4} = -\frac{9}{2} \Rightarrow y = \frac{-3-2\left(-\frac{9}{2}\right)}{3} = \frac{-3+9}{3} = \frac{6}{3} = +2 \rightarrow \begin{cases} x = -\frac{9}{2} \\ y = +2 \end{cases}$$



1. Resuelve los siguientes sistemas de ecuaciones.

a.
$$\begin{cases} \frac{2-x}{6} + \frac{3+y}{12} = 1 \\ \frac{8-3x}{2} - \frac{2+y}{3} = \frac{2}{3} \end{cases}$$

b.
$$\begin{cases} \frac{x-1}{5} - \frac{x-y}{3} + 5 = \frac{2x+9y}{15} \\ -5 \cdot (x+y-8) + 13 = -3y-7 \end{cases}$$

c.
$$\begin{cases} \frac{x+1}{7} - \frac{y}{5} = 2 \\ 5(x+3) - 3(5x-y) = 2(y-1) - 8x \end{cases}$$

d.
$$\begin{cases} 2(x+1) - y = 2y+3 \\ 4(x+y) - x + 2y = 9x \end{cases}$$

2. Resuelve los siguientes sistemas de ecuaciones.

a.
$$\begin{cases} \frac{x+1}{12} + \frac{y}{4} = \frac{2}{8} \\ \frac{x-3}{8} + y = \frac{1}{2} \end{cases}$$

b.
$$\begin{cases} \frac{x-1}{6} + 2y = 11 \\ \frac{y+1}{6} + 3x = 22 \end{cases}$$

c.
$$\begin{cases} x - 2 \cdot (x+y) = 3y - 2 \\ \frac{x}{3} + \frac{y}{2} = 3 \end{cases}$$

d.
$$\begin{cases} \frac{x-1}{5} - \frac{x-y}{3} + 5 = \frac{2x+9y}{15} \\ -5 \cdot (x+y-8) + 13 = -3y-7 \end{cases}$$