

Sesión 7

→ Ejercicio A3:

$$\begin{cases} \frac{x-4}{2} - \frac{y-5}{3} = 0 \\ \frac{x}{3} + \frac{y}{4} = 2x - y \end{cases}$$

Método de igualación

$$\begin{cases} 3x - 12 - 2y + 10 = 0 \\ 4x + 3y = 24x - 12y \end{cases}$$

$$\begin{cases} 3x - 2y = 12 - 10 & \longrightarrow & \begin{cases} 3x - 2y = 2 & \longrightarrow & x = \frac{2+2y}{3} \\ -24x + 4x + 3y + 12y = 0 & \longrightarrow & -20x + 15y = 0 & \longrightarrow & x = \frac{0-15y}{-20} \end{cases} \end{cases}$$

$$\frac{2+2y}{3} = \frac{15y}{20}$$

$$40 + 40y = 45y$$

$$40y - 45y = -40$$

$$-5y = -40$$

$$y = \frac{40}{5}$$

$$y = 8$$

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

$$x = \frac{2+16}{3}$$

$$x = \frac{18}{3}$$

$$x = 6$$

→ Ejercicio B2:

Método de reducción

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

$$\begin{cases} 2x + 3y = -3 & \longrightarrow & 2x + 3y = -3 & \longrightarrow & \begin{cases} -2x - 3y = 3 & \textcircled{1} \\ 2x + y = -9 & \textcircled{2} \end{cases} \\ 2x + 2 + \frac{y+1}{6} = -6 & \longrightarrow & 2x + y = -2 - 1 - 6 & \longrightarrow & \end{cases}$$

$$\textcircled{1} -2x - 3y = 3$$

$$-2x - 3(3) = 3$$

$$-2x - 9 = 3$$

$$-2x = 3 + 9$$

$$-2x = 12$$

$$x = -6$$

$$-2y = -6$$

$$y = 3$$

→ Ejercicio B3:

Método de reducción

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

$$\begin{cases} 2x + 2 - 3y = -4y + 4x + 2 & \longrightarrow & -2x + y = 2 - 2 & \longrightarrow & \begin{cases} -2x + y = 0 & \textcircled{1} \\ 8x - y = -6 & \textcircled{2} \end{cases} \\ 9x - y = x - 6 & \longrightarrow & 8x - y = -6 & \longrightarrow & \end{cases}$$

$$\textcircled{1} -2x + y = 0$$

$$-2(-1) + y = 0$$

$$2 + y = 0$$

$$y = -2$$

$$6x = -6$$

$$x = -1$$