

Modulo 6 Cuarto Medio

①

$$\begin{array}{l} 3x + 5y = 8 \quad | \cdot 3 \\ 4x - 3y = 1 \quad | \cdot 5 \end{array}$$

$$\begin{array}{l} 9x + 15y = 24 \\ 20x - 15y = 5 \end{array}$$

$$29x = 29 \quad | : 29$$

$$\boxed{x = 1}$$

Reemplazar

$$3 \cdot 1 + 5y = 8$$

$$5y = 8 - 3$$

$$5y = 5 \quad | : 5$$

$$\boxed{y = 1}$$

②

$$\begin{array}{l} 3x + 2y = 4 \\ 2x - 3y = 7 \end{array}$$

Despejar x en ambas ecuaciones

$$3x + 2y = 4$$

$$3x = 4 - 2y$$

$$x = \frac{4 - 2y}{3} \quad *$$

$$2x - 3y = 7$$

$$2x = 7 + 3y$$

$$x = \frac{7 + 3y}{2} \quad *$$

se juntan los *

$$\frac{4 - 2y}{3} = \frac{7 + 3y}{2}$$

$$8 - 4y = 21 + 9y$$

$$-13y = 13 \quad | : -13$$

$$\boxed{y = -1}$$

Reemplazar

$$x = \frac{4 - 2 \cdot (-1)}{3}$$

$$x = \frac{6}{3}$$

$$\boxed{x = 2}$$

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

Despejas y en la primera

$$\begin{aligned} x + y &= 2 \\ y &= 2 - x \end{aligned}$$

Reemplazo

$$\begin{aligned} -2x - (2 - x) &= 1 \\ -2x - 2 + x &= 1 \\ -x - 2 &= 1 \\ -x &= 3 \end{aligned}$$

$$x + y = 2$$

$$\begin{aligned} -3 + y &= 2 \\ \boxed{y = 5} \end{aligned}$$

$$\boxed{x = -3}$$

$$\textcircled{4} \begin{cases} x + 4y = 1 \\ 2x + y = -5 \end{cases} \quad | \cdot -2$$

Reemplazo

$$\begin{aligned} -2x - 8y &= -2 \\ 2x + y &= -5 \\ \hline -7y &= -7 \\ \boxed{y = 1} \end{aligned}$$

$$\begin{aligned} x + 4 \cdot 1 &= 1 \\ x &= 1 - 4 \\ \boxed{x = -3} \end{aligned}$$

$$\textcircled{1} \begin{cases} 5x + 7y = 50 \\ 9x + 14y = 97 \end{cases} \quad | \cdot 2 \quad \text{Por reducci3n yo que } 7 \cdot 2 \text{ es } 14$$

$$\begin{aligned} -10x + 14y &= 100 \\ 9x + 14y &= 97 \\ \hline -x &= -3 \\ \boxed{x = 3} \end{aligned}$$

Reemplazo

$$\begin{aligned} 5 \cdot 3 + 7y &= 50 \\ 15 + 7y &= 50 \end{aligned}$$

$$7y = 35$$

$$\boxed{y = 5}$$

$$\textcircled{2} \quad \begin{array}{l} 12x - 13y = 9 \\ -4x + 17y = 35 \end{array} \quad | \cdot 3$$

$$\begin{array}{l} 12x - 13y = 9 \\ -12x + 51y = 105 \end{array}$$

$$38y = 114 \quad | : 38$$

$$\boxed{y = 3}$$

Reemplaz

$$12x - 13 \cdot 3 = 9$$

$$12x - 39 = 9$$

$$12x = 48$$

$$\boxed{x = 4}$$

Reducción

$$\textcircled{3} \quad \begin{array}{l} 8x - 5y = 49 \\ 7x + 15y = 101 \end{array} \quad | \cdot 3$$

$$\begin{array}{l} 24x - 15y = 147 \\ 7x + 15y = 101 \end{array}$$

$$31x = 248 \quad | : 31$$

$$\boxed{x = 8}$$

Reemplazar

$$8 \cdot 8 - 5y = 49$$

$$64 - 5y = 49$$

$$-5y = -15 \quad | : -5$$

$$\boxed{y = 3}$$

$$\textcircled{4} \quad \begin{array}{l} 10x + 3y = 23 \\ -2x + 5y = 1 \end{array} \quad \begin{array}{l} \text{IGUALACION} \\ \text{en AMBAS ECUACIONES} \\ \text{DESPEJAR } x \text{ e IGUALAR} \end{array}$$

$$10x + 3y = 23$$

$$3y = 23 - 10x$$

$$y = \frac{23 - 10x}{3}$$

$$-2x + 5y = 1$$

$$5y = 1 + 2x$$

$$y = \frac{1 + 2x}{5}$$

$$\frac{23 - 10x}{3} = \frac{1 + 2x}{5}$$

$$115 - 50x = 3 + 6x$$

$$-56x = -112$$

$$-x = -2$$

$$\boxed{x = 2}$$

$$x = 2$$

$$10 \cdot 2 + 3y = 23$$

$$20 + 3y = 23$$

$$3y = 3$$

$$\boxed{y = 1}$$