

① Να λυθεί το σύστημα $\begin{cases} 2x - y = -1 \\ \frac{3x}{4} + \frac{y+1}{2} = 7 \end{cases}$ με την μέθοδο της Αντικατάστασης

Λύση

$$\begin{aligned} \textcircled{2} \begin{cases} 2x - y = -1 \\ \frac{3x}{4} + \frac{y+1}{2} = 7 \end{cases} & \parallel \begin{cases} 2x - y = -1 \\ 4 \cdot \frac{3x}{4} + 4 \cdot \frac{y+1}{2} = 4 \cdot 7 \end{cases} \parallel \begin{cases} 2x - y = -1 \\ 3x + 2(y+1) = 28 \end{cases} \parallel \begin{cases} 2x - y = -1 \\ 3x + 2y + 2 = 28 \end{cases} \end{aligned}$$

$$\begin{aligned} & \parallel \begin{cases} 2x - y = -1 \\ (1) \quad 3x + 2y = 26 \end{cases} \parallel \begin{cases} 2x - y = -1 \Rightarrow -y = -2x - 1 \Rightarrow y = 2x + 1 \quad (2) \end{cases} \end{aligned}$$

$$(1) \xrightarrow{(2)} 3x + 2(2x + 1) = 26 \Rightarrow 3x + 4x + 2 = 26 \Rightarrow 7x = 24 \Rightarrow x = \frac{24}{7}$$

Αρα παίρνουμε $\epsilon\delta\omega$ και οπου $x = \frac{24}{7} \Rightarrow 2 \cdot \frac{24}{7} - y = -1 \Rightarrow \frac{48}{7} - y = -1 \Rightarrow$

$$\cancel{\frac{48}{7}} - \frac{48}{7} - 7y = -1 \cdot 7 \Rightarrow 48 - 7y = -7 \Rightarrow -7y = -55 \Rightarrow y = \frac{55}{7} \text{ Αρα } A\left(\frac{24}{7}, \frac{55}{7}\right)$$