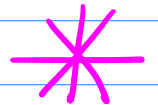


$$\left. \begin{array}{l} 2x_1 - x_2 + x_3 = 1 \\ x_1 - 3x_2 + x_3 = 2 \\ 3x_1 - 2x_2 + 2x_3 = 3 \end{array} \right\} \begin{array}{l} \text{Θέλω ο} \\ \text{αδελφός να} \\ \text{έχει συντελεστή} \\ \text{μονάδα} \end{array} \left. \begin{array}{l} \boxed{x_1} - 3x_2 + x_3 = 2 \\ 2x_1 - x_2 + x_3 = 1 \\ 3x_1 - 2x_2 + 2x_3 = 3 \end{array} \right\} \begin{array}{l} \text{Οδηγός} \\ \Gamma_2 - 2\Gamma_1 \\ \Gamma_3 - 3\Gamma_1 \end{array}$$

$$\sim \left. \begin{array}{l} x_1 - 3x_2 + x_3 = 2 \\ 5x_2 - x_3 = -3 \\ 7x_2 - x_3 = -3 \end{array} \right\} \left(\frac{1}{5}\Gamma_2 \right) \sim \left. \begin{array}{l} x_1 - 3x_2 + x_3 = 2 \\ \boxed{x_2} - \frac{1}{5}x_3 = -\frac{3}{5} \\ 7x_2 - x_3 = -3 \end{array} \right\} \begin{array}{l} \Gamma_3 - 7\Gamma_2 \end{array}$$

$$\sim \left. \begin{array}{l} x_1 - 3x_2 + x_3 = 2 \\ x_2 - \frac{1}{5}x_3 = -\frac{3}{5} \\ \frac{2}{5}x_3 = \frac{6}{5} \end{array} \right\} \left(\frac{5}{2}\Gamma_3 \right) \sim \left. \begin{array}{l} x_1 - 3x_2 + x_3 = 2 \\ x_2 - \frac{1}{5}x_3 = -\frac{3}{5} \\ \boxed{x_3} = 3 \end{array} \right\} \begin{array}{l} \Gamma_1 - \Gamma_3 \\ \Gamma_2 + \frac{1}{5}\Gamma_3 \end{array}$$



$$\sim \left. \begin{array}{l} X_1 - 3X_2 = -1 \\ \boxed{X_2} = 0 \\ X_3 = 3 \end{array} \right\} \Gamma_1 + 3\Gamma_2 \sim \left. \begin{array}{l} X_1 = -1 \\ X_2 = 0 \\ X_3 = 3 \end{array} \right\}$$

* Στο σύστημα αυτό θα μπορούσαμε να λύσουμε με "προς τα πίσω αλγεβράζηση"

$$\left. \begin{array}{l} X_1 - 3X_2 + X_3 = 2 \\ X_2 - \frac{1}{5}X_3 = -\frac{3}{5} \\ X_3 = 3 \end{array} \right\} \Rightarrow \left. \begin{array}{l} X_1 - 3X_2 + 3 = 2 \\ X_2 - \frac{3}{5} = -\frac{3}{5} \\ X_3 = 3 \end{array} \right\} \Rightarrow \left. \begin{array}{l} X_1 - 3X_2 = -1 \\ X_2 = 0 \\ X_3 = 3 \end{array} \right\} \Rightarrow$$

$$\left. \begin{array}{l} X_1 = -1 \\ X_2 = 0 \\ X_3 = 3 \end{array} \right\}$$