

Β ΛΥΚΕΙΟΥ ΑΛΓΕΒΡΑ

19.12 1)

$$P(3) = 24 \Rightarrow 3^3 + (\lambda + 1) \cdot 3 + \lambda^2 - 10 = 24 \Rightarrow 27 + 3\lambda + 3 + \lambda^2 - 10 = 24 \Rightarrow \lambda^2 + 3\lambda - 4 = 0$$

$$\text{Είναι } \Delta = 3^2 - 4 \cdot (-4) = 25 \Rightarrow \lambda_{1,2} = \frac{-3 \pm 5}{2}, \text{ άρα } \lambda = -4 \text{ ή } \lambda = 1$$

19.12 2)

$$P(2) = -4 \Rightarrow 2^2 + 2\lambda \cdot 2 - \lambda + 7 = -4 \Rightarrow$$

$$\Rightarrow 4 + 4\lambda - \lambda + 7 = -4 \Rightarrow 3\lambda = -15 \Rightarrow \lambda = -5$$

19.12 3)

$$P(-1) = 1 \Rightarrow 5(-1)^2 + 3\lambda(-1) + \lambda^2 - 2 = 1 \Rightarrow$$

$$\Rightarrow 5 - 3\lambda + \lambda^2 - 2 = 1 \Rightarrow \lambda^2 - 3\lambda + 2 = 0$$

$$\Delta = 3^2 - 4 \cdot 2 = 1 \Rightarrow \lambda_{1,2} = \frac{3 \pm 1}{2} \begin{matrix} \nearrow x_1 = 2 \\ \searrow x_2 = 1 \end{matrix}$$

19.12 4)

$$P(1) = 4 \Rightarrow 2 \cdot 1^2 + \lambda^2 + 3\lambda + 4 = 4 \Rightarrow 2 + \lambda^2 + 3\lambda + 4 = 4 \Rightarrow \lambda^2 + 3\lambda + 2 = 0$$

$$\Delta = 3^2 - 4 \cdot 2 = 1 \Rightarrow \lambda_{1,2} = \frac{-3 \pm 1}{2} \begin{matrix} \nearrow x_1 = -2 \\ \searrow x_2 = -1 \end{matrix}$$

19.12 5)

$$P(-2) = -8 \Rightarrow (-2)^3 - (2\lambda + 1) \cdot (-2)^2 - 2\lambda^2 - 2 = -8 \Rightarrow$$

$$\Rightarrow -8 - 8\lambda - 4 - 2\lambda^2 - 2 = -8 \Rightarrow -2\lambda^2 - 8\lambda - 6 = 0 \Rightarrow \lambda^2 + 4\lambda + 3 = 0$$

$$\Delta = 4^2 - 4 \cdot 3 = 4 \Rightarrow \lambda_{1,2} = \frac{-4 \pm 2}{2} \begin{matrix} \nearrow x_1 = -3 \\ \searrow x_2 = -1 \end{matrix}$$