

Γ ΛΥΚΕΙΟΥ ΜΕΡΟΣ Β

26.7 1)

$$\begin{aligned} f'(x) &= 3x^2 + 2\lambda x + 2 \\ f''(x) &= 6x + 2\lambda \\ \text{Θα ισχύει } f''(2) &= 0 \Rightarrow 6 \cdot 2 + 2\lambda = 0 \Rightarrow 2\lambda = -12 \Rightarrow \lambda = -6 \end{aligned}$$

26.7 2)

$$\begin{aligned} f'(x) &= 3\lambda x^2 - 12x + 2 \\ f''(x) &= 6\lambda x - 12 \\ \text{Θα ισχύει } f''(1) &= 0 \Rightarrow 6\lambda \cdot 1 - 12 = 0 \Rightarrow 6\lambda = 12 \Rightarrow \lambda = 2 \end{aligned}$$

26.7 3)

$$\begin{aligned} f'(x) &= 4x^3 + 3\lambda x^2 + 12x - 4 \\ f''(x) &= 12x^2 + 6\lambda x + 12 \\ \text{Θα ισχύει } f''(-1) &= 0 \Rightarrow 12(-1)^2 + 6\lambda(-1) + 12 = 0 \Rightarrow 12 - 6\lambda + 12 = 0 \Rightarrow \\ &\Rightarrow -6\lambda = -24 \Rightarrow \lambda = 4 \end{aligned}$$

26.7 4)

$$\begin{aligned} f'(x) &= 3(\lambda + 1)x^2 + 4\lambda x - 8 \\ f''(x) &= 6(\lambda + 1)x + 4\lambda \\ \text{Θα ισχύει } f''(-1) &= 0 \Rightarrow 6(\lambda + 1)(-1) + 4\lambda = 0 \Rightarrow -6\lambda - 6 + 4\lambda = 0 \Rightarrow \\ &\Rightarrow -2\lambda = 6 \Rightarrow \lambda = -3 \end{aligned}$$