

$$\underline{4 - 4815}$$

$$\alpha) \text{ Πρέπει } \left. \begin{aligned} (-2)^2 - 2k + \lambda &= 0 \Leftrightarrow \lambda - 2k = -4 \\ 1^2 + k + \lambda &= 0 \Leftrightarrow \lambda + k = -1 \end{aligned} \right\} \Rightarrow \theta$$

$$3k = 3 \Leftrightarrow k = 1 \text{ και } \lambda = -2$$

$$\beta) i) g(x) = \frac{(x-1)(x+1) \cdot (x-2)(x+2)}{(x-1) \cdot (x+2)} =$$

$$(x+1)(x-2)$$

$$x \neq -2, 1$$

$$\begin{aligned} ii) g(\alpha+3) > g(\alpha) &\Leftrightarrow (\alpha+4)(\alpha+1) > \\ (\alpha+1)(\alpha-2) &\Leftrightarrow (\alpha+1) \cdot (\alpha+4 - \alpha+2) > 0 \\ \Leftrightarrow 6(\alpha+1) > 0 &\Leftrightarrow \alpha > -1 \end{aligned}$$

Άρα όταν $-1 < \alpha < 2$ έχουμε $g(\alpha+3) > g(\alpha)$