

## 14.12    1)

Είναι  $\alpha + \beta = \frac{\pi}{2} \Rightarrow \beta = \frac{\pi}{2} - \alpha$  . Επομένως

$$\alpha) \quad \eta\mu^2\alpha + \eta\mu^2\beta = \eta\mu^2\alpha + \eta\mu^2\left(\frac{\pi}{2} - \alpha\right) \stackrel{\eta\mu\left(\frac{\pi}{2}-\alpha\right)=\sigma\upsilon\nu\alpha}{=} \eta\mu^2\alpha + \sigma\upsilon\nu^2\alpha = 1$$

$$\beta) \quad \sigma\upsilon\nu^2\alpha + \sigma\upsilon\nu^2\beta = \sigma\upsilon\nu^2\alpha + \sigma\upsilon\nu^2\left(\frac{\pi}{2} - \alpha\right) \stackrel{\sigma\upsilon\nu\left(\frac{\pi}{2}-\alpha\right)=\eta\mu\alpha}{=} \sigma\upsilon\nu^2\alpha + \eta\mu^2\alpha = 1$$

$$\gamma) \quad \epsilon\varphi\alpha \cdot \epsilon\varphi\beta = \epsilon\varphi\alpha \cdot \epsilon\varphi\left(\frac{\pi}{2} - \alpha\right) \stackrel{\epsilon\varphi\left(\frac{\pi}{2}-\alpha\right)=\sigma\varphi\alpha}{=} \epsilon\varphi\alpha \cdot \sigma\varphi\alpha = 1$$

$$\delta) \quad \sigma\varphi\alpha \cdot \sigma\varphi\beta = \sigma\varphi\alpha \cdot \sigma\varphi\left(\frac{\pi}{2} - \alpha\right) \stackrel{\sigma\varphi\left(\frac{\pi}{2}-\alpha\right)=\epsilon\varphi\alpha}{=} \sigma\varphi\alpha \cdot \epsilon\varphi\alpha = 1$$

## 14.12    2)

Είναι  $\alpha + \beta = \frac{3\pi}{2} \Rightarrow \beta = \frac{3\pi}{2} - \alpha$  Επομένως :

$$\alpha) \quad \eta\mu^2\alpha + \sigma\upsilon\nu^2\beta = \eta\mu^2\alpha + \sigma\upsilon\nu^2\left(\frac{3\pi}{2} - \alpha\right) = \eta\mu^2\alpha + (-\sigma\upsilon\nu \cdot \alpha)^2 = \eta\mu^2\alpha + \sigma\upsilon\nu^2\alpha = 1$$

$$\beta) \quad \epsilon\varphi\alpha \cdot \epsilon\varphi\beta = \epsilon\varphi\alpha \cdot \epsilon\varphi\left(\frac{3\pi}{2} - \alpha\right) = \epsilon\varphi\alpha \cdot \sigma\varphi\alpha = 1$$

## 14.12    3)

Είναι  $\alpha - \beta = \frac{3\pi}{2} \Rightarrow \beta = \frac{3\pi}{2} + \alpha$  Επομένως :

$$\alpha) \quad \sigma\upsilon\nu^2\alpha + \sigma\upsilon\nu^2\beta = \sigma\upsilon\nu^2\alpha + \sigma\upsilon\nu^2\left(\frac{3\pi}{2} + \alpha\right) = \sigma\upsilon\nu^2\alpha + \eta\mu^2\alpha = 1$$

$$\beta) \quad \sigma\varphi\alpha \cdot \sigma\varphi\beta = \sigma\varphi\alpha \cdot \sigma\varphi\left(\frac{3\pi}{2} + \alpha\right) = \sigma\varphi\alpha \cdot (-\epsilon\varphi\alpha) = -1$$