

17.22

Αρκεί να αποδειχθεί ότι η παράσταση είναι ανεξάρτητη του ω

$$\begin{aligned} & \frac{\eta\mu(\pi-\omega) \cdot \sigma\upsilon\nu(\omega-2\pi) \cdot \epsilon\varphi(3\pi-\omega)}{\sigma\varphi\left(\frac{\pi}{2}+\omega\right) \cdot \epsilon\varphi\left(\frac{3\pi}{2}-\omega\right)} - \frac{\sigma\upsilon\nu\left(\omega-\frac{\pi}{2}\right) \cdot \eta\mu\left(\omega+\frac{3\pi}{2}\right) \cdot \sigma\varphi(\omega+\pi)}{\eta\mu^2(-\omega) + \sigma\upsilon\nu^2(3\pi-\omega)} = \\ &= \frac{\eta\mu\omega \cdot \sigma\upsilon\nu[-(2\pi-\omega)] \cdot \epsilon\varphi(2\pi+\pi-\omega)}{-\epsilon\varphi\omega \cdot \sigma\varphi\omega} - \frac{\sigma\upsilon\nu\left[-\left(\frac{\pi}{2}-\omega\right)\right] \cdot (-\sigma\upsilon\nu\omega) \cdot \sigma\varphi\omega}{\eta\mu^2\omega + \sigma\upsilon\nu^2(2\pi+\pi-\omega)} = \\ &= \frac{\eta\mu\omega \cdot \sigma\upsilon\nu\omega \cdot (-\epsilon\varphi\omega)}{-\epsilon\varphi\omega \cdot \sigma\varphi\omega} + \frac{\eta\mu\omega \cdot \sigma\upsilon\nu\omega \cdot \sigma\varphi\omega}{\eta\mu^2\omega + \sigma\upsilon\nu^2\omega} = \\ &= \eta\mu\omega \cdot \sigma\upsilon\nu\omega \cdot \frac{1}{\sigma\varphi\omega} + \eta\mu\omega \cdot \sigma\upsilon\nu\omega \cdot \sigma\varphi\omega = \\ &= \eta\mu\omega \cdot \sigma\upsilon\nu\omega \cdot \epsilon\varphi\omega + \eta\mu\omega \cdot \sigma\upsilon\nu\omega \cdot \sigma\varphi\omega = \\ &= \eta\mu\omega \cdot \sigma\upsilon\nu\omega \cdot \frac{\eta\mu\omega}{\sigma\upsilon\nu\omega} + \eta\mu\omega \cdot \sigma\upsilon\nu\omega \cdot \frac{\sigma\upsilon\nu\omega}{\eta\mu\omega} = \\ &= \eta\mu^2\omega + \sigma\upsilon\nu^2\omega = 1 = \text{σταθερό} \end{aligned}$$