

Β ΛΥΚΕΙΟΥ ΑΛΓΕΒΡΑ

17.28

Παρατηρούμε ότι :

- $\varepsilon\varphi(540^\circ + \omega) = \varepsilon\varphi(3 \cdot 180^\circ + \omega) = \varepsilon\varphi(180^\circ + \omega) = \varepsilon\varphi\omega$
- $\varepsilon\varphi(450^\circ + \omega) = \varepsilon\varphi(360^\circ + 90^\circ + \omega) = \varepsilon\varphi(90^\circ + \omega) = -\sigma\varphi\omega$
- $\sigma\text{vn}(630^\circ + \omega) = \sigma\text{vn}(360^\circ + 270^\circ + \omega) = \sigma\text{vn}(270^\circ + \omega) = \eta\mu\omega$
- $\eta\mu(810^\circ - \omega) = \eta\mu(720^\circ + 90^\circ - \omega) = \eta\mu(2 \cdot 360^\circ + 90^\circ - \omega) = \eta\mu(90^\circ - \omega) = \sigma\text{vn}\omega$
- $\sigma\varphi(990^\circ - \omega) = \sigma\varphi(5 \cdot 180^\circ + 90^\circ - \omega) = \sigma\varphi(4 \cdot 180^\circ + 180^\circ + 90^\circ - \omega) = \sigma\varphi(270^\circ - \omega) = \varepsilon\varphi\omega$
- $\sigma\text{vn}(\omega - 720^\circ) = \sigma\text{vn}[-(720^\circ - \omega)] = \sigma\text{vn}(720^\circ - \omega) = \sigma\text{vn}(2 \cdot 360^\circ - \omega) = \sigma\text{vn}\omega$

Επομένως η αρχική παράσταση γράφεται :

$$\frac{\varepsilon\varphi\omega \cdot (-\sigma\varphi\omega) \cdot \eta\mu\omega}{\sigma\text{vn}\omega \cdot \varepsilon\varphi\omega \cdot \sigma\text{vn}\omega} = \frac{-\sigma\varphi\omega \cdot \varepsilon\varphi\omega}{\sigma\text{vn}\omega} = -\frac{1}{\sigma\text{vn}\omega}$$