

**Ασκήσεις:**

1) Να δείξετε ότι:

$$\alpha) \sigma v \nu 20^\circ - \frac{1}{2} = 4\eta \mu^2 30^\circ \sigma v \nu 20^\circ$$

$$\beta) \sigma v \nu 75^\circ \sigma v \nu 165^\circ = \frac{-1}{4}$$

$$\gamma) \eta \mu 15^\circ \eta \mu 105^\circ + \eta \mu 45^\circ \eta \mu 165^\circ = \frac{\sqrt{3}}{4}$$

2) Να αποδειχτούν οι ταυτότητες:

$$\alpha) \frac{\eta \mu 4\alpha \cdot \sigma v \nu 5\alpha + \eta \mu \alpha}{\eta \mu 5\alpha} = \sigma v \nu 4\alpha$$

$$\beta) \frac{2\eta \mu 46^\circ \sigma v \nu 26^\circ - \eta \mu 20^\circ}{2\eta \mu 10^\circ \sigma v \nu 26^\circ + \eta \mu 16^\circ} = 2\sigma v \nu 36^\circ$$

$$\gamma) \frac{\eta \mu 5\alpha + 2\eta \mu 4\alpha + \eta \mu 3\alpha}{\sigma v \nu 5\alpha + \sigma v \nu 3\alpha + 2\sigma v \nu 4\alpha} = \varepsilon \phi 4\alpha$$

3) Να αποδειχτούν οι ταυτότητες:

$$\alpha) \varepsilon \phi(45^\circ + \alpha) - \varepsilon \phi(45^\circ - \alpha) = 2\varepsilon \phi 2\alpha$$

$$\beta) \eta \mu \chi + 2\eta \mu 2\chi + \eta \mu 3\chi = 4\eta \mu 2\chi \cdot \sigma v \nu^2 \frac{\chi}{2}$$