

ΕΝΔΕΙΚΤΙΚΕΣ ΑΠΑΝΤΗΣΕΙΣ:

ΘΕΜΑ 4°

$$\alpha) \sigma_{\varepsilon\pi} = \frac{\sigma_{\theta\rho}}{\nu} \Rightarrow \sigma_{\theta\rho} = \sigma_{\varepsilon\pi} \cdot \nu \Rightarrow \sigma_{\theta\rho} = 150 \frac{N}{mm^2} \cdot 2 \Rightarrow \sigma_{\theta\rho} = 300 \frac{N}{mm^2}$$

$$\beta) A = \frac{\pi d^2}{4} \Rightarrow A = \frac{3,14 \cdot (40mm)^2}{4} \Rightarrow A = \frac{3,14 \cdot 160 mm^2}{4} \Rightarrow A = 3,14 \cdot 40 mm^2 \Rightarrow$$

$$A = 125,6 mm^2$$

$$\sigma_{\theta\rho} = \frac{F_{\theta\rho}}{A} \Rightarrow F_{\theta\rho} = \sigma_{\theta\rho} \cdot A \Rightarrow F_{\theta\rho} = 300 \frac{N}{mm^2} \cdot 125,6 mm^2 \Rightarrow F_{\theta\rho} = 37680 N$$