

**ΕΝΔΕΙΚΤΙΚΕΣ ΑΠΑΝΤΗΣΕΙΣ:**

**α)**  $A = a^2 = 4^2 \text{ cm}^2 = 16 \text{ cm}^2$

**β)**  $\sigma = \frac{F}{A} \Rightarrow \sigma = \frac{2000 \text{ daN}}{16 \text{ cm}^2} \Rightarrow \sigma = 125 \text{ daN/cm}^2$

**γ)**  $\varepsilon = \frac{\Delta l}{l} \Rightarrow \varepsilon = \frac{0,050 \text{ cm}}{100 \text{ cm}} \Rightarrow \varepsilon = 0,0005$

**δ)**  $\sigma = 125 \frac{\text{daN}}{\text{cm}^2} > 80 \frac{\text{daN}}{\text{cm}^2} = \sigma_{\varepsilon\pi}$ . Άρα η δοκός δεν θα αντέξει.