

Zad. 2

$$E := 5 \text{ GPa}$$

$$L := 10 \text{ m}$$

$$b := 7 \text{ cm}$$

$$h := 8 \text{ cm}$$

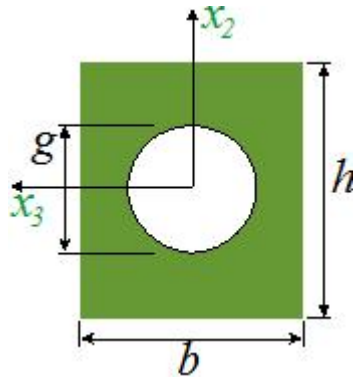
$$g := 5 \text{ cm}$$

$$mb := \begin{pmatrix} 2 \\ 1 \\ 0.699156 \\ 0.5 \end{pmatrix}$$

$$\text{Sch} := 2$$

$$\mu := mb_{\text{Sch}}$$

$$Lw := \mu \cdot L$$



$$J2 := \frac{h \cdot b^3}{12} - \frac{\pi g^4}{64} = 197.987 \cdot \text{cm}^4$$

$$J3 := \frac{h^3 \cdot b}{12} - \frac{\pi g^4}{64} = 267.987 \cdot \text{cm}^4$$

$$J := \min(J2, J3) = 197.987 \cdot \text{cm}^4$$

$$P_{kr} := \frac{\pi^2 E \cdot J}{Lw^2} = 0.977 \cdot \text{kN}$$

