

Grupa B2

Zad. 2

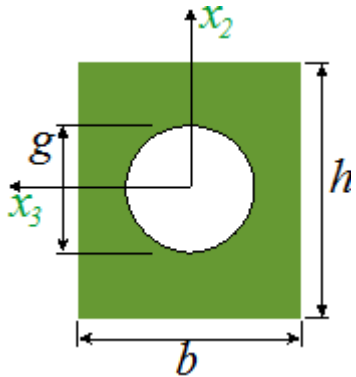
$$E := 11 \text{ GPa} \quad L := 5 \text{ m} \quad b := 4 \text{ cm} \quad h := 7 \text{ cm} \quad g := 3 \text{ cm}$$

$$\text{Sch} := 4 \quad \mu := mb_{\text{Sch}} \quad Lw := \mu \cdot L$$

$$mb := \begin{pmatrix} 2 \\ 1 \\ \frac{\pi}{z} \\ 0.5 \end{pmatrix}$$

$$z := 4.493409$$

$$mb_3 = 0.699156$$



$$J_2 := \frac{h \cdot b^3}{12} - \frac{\pi g^4}{64} = 33.357 \cdot \text{cm}^4$$

$$J_3 := \frac{h^3 \cdot b}{12} - \frac{\pi g^4}{64} = 110.357 \cdot \text{cm}^4$$

$$J := \min(J_2, J_3) = 33.357 \cdot \text{cm}^4$$

$$P_{kr} := \frac{\pi^2 E \cdot J}{Lw^2} = 5.79 \cdot \text{kN}$$

