

Zad. 2 Grupa A1

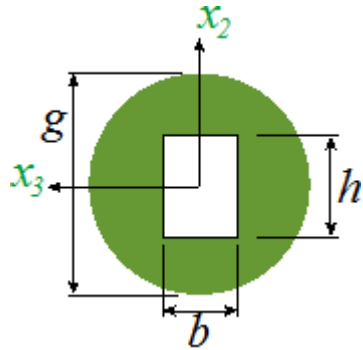
$$E := 13 \text{ GPa} \quad L := 5 \text{ m} \quad b := 3 \text{ cm} \quad h := 6 \text{ cm} \quad g := 12 \text{ cm}$$

$$\text{Sch} := 1 \quad \mu := mb_{\text{Sch}} \quad Lw := \mu \cdot L$$

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

$$z := 4.493409$$

$$mb_3 = 0.699156$$



$$b1 := b - 2g \quad h1 := h - 2 \cdot g$$

$$J3 := \frac{-b \cdot h^3}{12} + \frac{\pi g^4}{64} = 963.87602 \cdot \text{cm}^4$$

$$J2 := \frac{-b^3 \cdot h}{12} + \frac{\pi g^4}{64} = 1.004376 \times 10^3 \cdot \text{cm}^4$$

$$J := \min(J2, J3) = 963.876020 \cdot \text{cm}^4$$

$$P_{kr} := \frac{\pi^2 E \cdot J}{Lw^2} = 12.37 \cdot \text{kN}$$

