

Grupa B1

Zad. 2

$$E := 14 \text{ GPa}$$

$$L := 7 \text{ m}$$

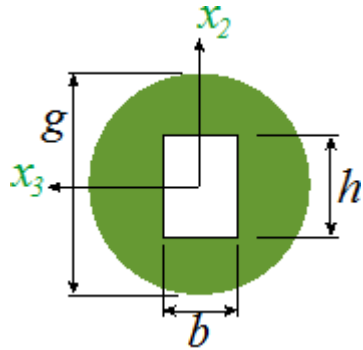
$$b := 3 \text{ cm}$$

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

$$g := 15 \text{ cm}$$

$$\text{Sch} := 4$$

$$z = 6.283185$$



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

$$J3 := \frac{-b \cdot h^3}{12} + \frac{\pi g^4}{64} = 2.453799 \times 10^3 \cdot \text{cm}^4$$

$$J2 := \frac{-b^3 \cdot h}{12} + \frac{\pi g^4}{64} = 2.473799 \times 10^3 \cdot \text{cm}^4$$

$$J := \min(J2, J3) = 2453.798876 \cdot \text{cm}^4$$

$$P_{kr} := \frac{z^2 E \cdot J}{L^2} = 276.78 \cdot \text{kN}$$

