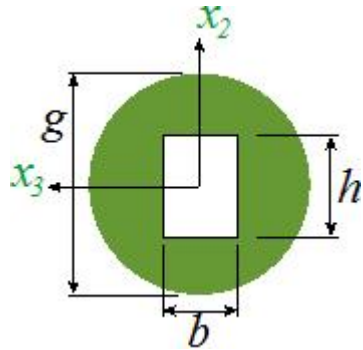


## Zad. 2

$$E := 18 \text{ GPa} \quad L := 5 \text{ m} \quad b := 3 \text{ cm} \quad h := 5 \text{ cm} \quad g := 7 \text{ cm}$$

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

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



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

$$J3 := \frac{-b \cdot h^3}{12} + \frac{\pi g^4}{64} = 86.608812 \cdot \text{cm}^4$$

$$J2 := \frac{-b^3 \cdot h}{12} + \frac{\pi g^4}{64} = 106.608812 \cdot \text{cm}^4$$

$$J := \min(J2, J3) = 86.608812 \cdot \text{cm}^4$$

$$P_{kr} := \frac{\pi^2 E \cdot J}{L_w^2} = 24.618 \cdot \text{kN}$$

