

Grupa A1

$$E := 23 \text{ GPa} \quad L := 10 \text{ m} \quad b := 10 \text{ cm} \quad h := 7 \text{ cm} \quad g := 15 \text{ cm}$$

$$J_3 := \frac{-b \cdot h^3}{12} + \frac{\pi g^4}{64} = 2.199216 \times 10^3 \cdot \text{cm}^4$$

$$J_2 := \frac{-b^3 \cdot h}{12} + \frac{\pi g^4}{64} = 1.901716 \times 10^3 \cdot \text{cm}^4$$

$$J := \min(J_2, J_3) = 1.901716 \times 10^3 \cdot \text{cm}^4$$

$$z = \text{tg}(z) \quad z = 4.493409$$

$$P_{kr} := \frac{z^2 E \cdot J}{L^2} = 88.31 \cdot \text{kN}$$

