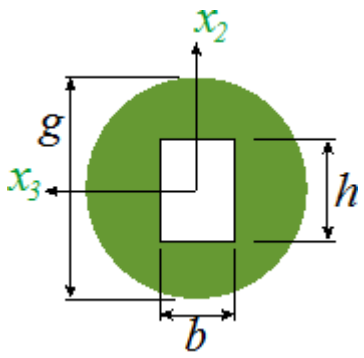
Grupa D

Zad. 2

$E := 16GPa$ $L := 8m$ $b := 3cm$ $h := 5cm$ $g := 20cm$ $Sch := 1$

$z = 1.570796$



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

$$J3 := \frac{-b \cdot h^3}{12} + \frac{\pi g^4}{64} = 7.822732 \times 10^3 \cdot cm^4$$

$$J2 := \frac{-b^3 \cdot h}{12} + \frac{\pi g^4}{64} = 7.842732 \times 10^3 \cdot cm^4$$

$J := \min(J2, J3) = 7822.731634 \cdot cm^4$

$$Pkr := \frac{z^2 E \cdot J}{L^2} = 48.255 \cdot kN$$