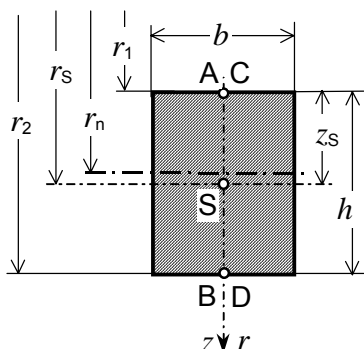


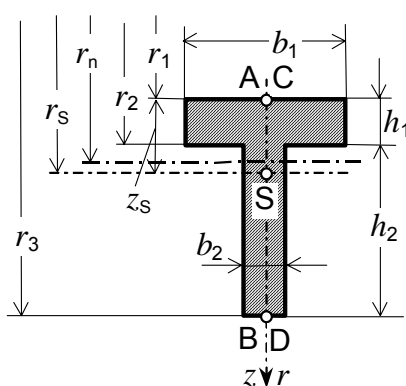
NEUTRALNA OS POPREČNOG PRESJEKA DEBELOG ZAKRIVLJENOG ŠTAPA

A) Zadano: r_1, b, h .

$$r_s = r_1 + z_s, \quad A = b \cdot h,$$

$$r_2 = r_1 + h,$$

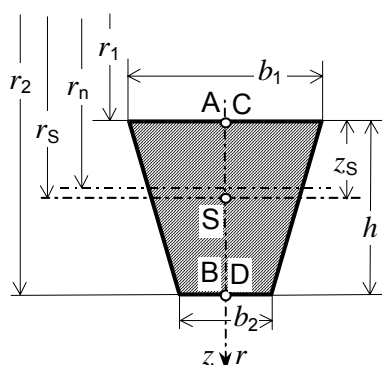
$$r_n = \frac{h}{\ln \frac{r_2}{r_1}}.$$

B) Zadano: r_1, b_1, b_2, h_1, h_2 .

$$r_s = r_1 + z_s, \quad A = b_1 \cdot h_1 + b_2 \cdot h_2,$$

$$r_2 = r_1 + h_1, \quad r_3 = r_2 + h_2,$$

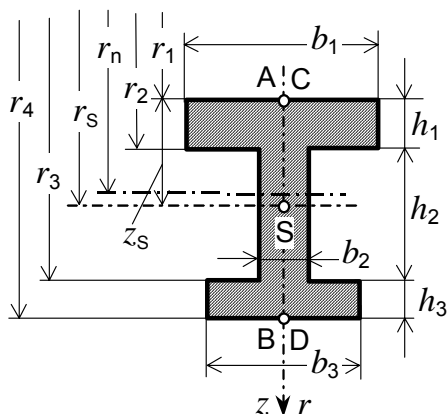
$$r_n = \frac{A}{b_1 \ln \frac{r_2}{r_1} + b_2 \ln \frac{r_3}{r_2}}.$$

C) Zadano: r_1, b_1, b_2, h .

$$r_s = r_1 + z_s, \quad z_s = \frac{h}{3} \frac{b_1 + 2b_2}{b_1 + b_2}, \quad A = \frac{h}{2} (b_1 + b_2),$$

$$r_2 = r_1 + h,$$

$$r_n = \frac{h}{2} \frac{b_1 + b_2}{\frac{b_1 r_2 - b_2 r_1}{h} \ln \frac{r_2}{r_1} - (b_1 - b_2)}.$$

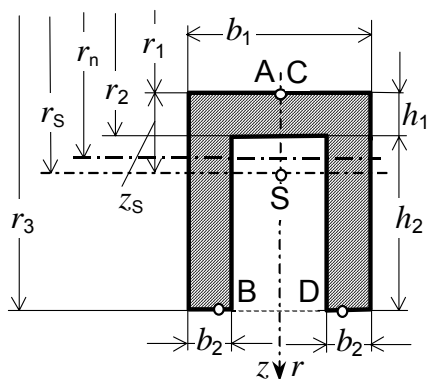
D) Zadano: $r_1, b_1, b_2, b_3, h_1, h_2, h_3$.

$$r_s = r_1 + z_s, \quad A = b_1 \cdot h_1 + b_2 \cdot h_2 + b_3 \cdot h_3,$$

$$r_2 = r_1 + h_1, \quad r_3 = r_2 + h_2, \quad r_4 = r_3 + h_3,$$

$$r_n = \frac{A}{b_1 \ln \frac{r_2}{r_1} + b_2 \ln \frac{r_3}{r_2} + b_3 \ln \frac{r_4}{r_3}}.$$

E) Zadano: r_1, b_1, b_2, h_1, h_2 .

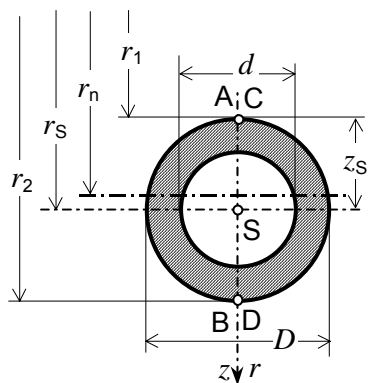


$$r_s = r_1 + z_s, \quad A = b_1 \cdot h_1 + 2b_2 \cdot h_2,$$

$$r_2 = r_1 + h_1, \quad r_3 = r_2 + h_2,$$

$$r_n = \frac{A}{b_1 \ln \frac{r_2}{r_1} + 2b_2 \ln \frac{r_3}{r_2}}.$$

F) Zadano: r_1, d, D .



$$r_s = r_1 + \frac{D}{2}, \quad A = \frac{D^2 - d^2}{4} \pi,$$

$$r_2 = r_1 + D,$$

$$r_n = \frac{D^2 - d^2}{4 \left(\sqrt{4r_s^2 - d^2} - \sqrt{4r_s^2 - D^2} \right)}.$$