

Remarks: See §3.2.2, pages 98 till 100

Answers:

a. $I_{\bar{z}\bar{z}} = 70 \times 10^6 \text{ mm}^4$

b. $I_{zz} = 40 \times 10^6 \text{ mm}^4$

Explanation:

$$I_{\bar{z}\bar{z}} = I_{zz} + Aa^2$$

b. $I_{zz} = 47,5 \times 10^6 \text{ mm}^4 - (12 \times 10^3 \text{ mm}^2)(25 \text{ mm})^2 = 40 \times 10^6 \text{ mm}^4$

a. $I_{\bar{z}\bar{z}} = 40 \times 10^6 \text{ mm}^4 + (12 \times 10^3 \text{ mm}^2)(50 \text{ mm})^2 = 70 \times 10^6 \text{ mm}^4$