

[Remarks:](#) See §3.2.2, pages 98 till 100

See §3.2.4, pages 101 till 103

[Answers:](#)

a. $I_{zz} = 967,68 \times 10^6 \text{ mm}^4$

b. $I_{zz} = 138,24 \times 10^6 \text{ mm}^4$

c. 700%

[Explanation:](#)

Centroidal moment of inertia of each cross-section:

$$I_{zz} = 8,64 \times 10^6 \text{ mm}^4$$

a. $I_{zz} = 4 \times \left\{ (8,64 \times 10^6 \text{ mm}^4) + (60 \text{ mm})(120 \text{ mm})(180 \text{ mm})^2 \right\} = 967,68 \times 10^6 \text{ mm}^4$

b. $I_{zz} = \frac{1}{12} \times (120 \text{ mm})(240 \text{ mm})^3 = 138,24 \times 10^6 \text{ mm}^4$