Remarks: See §6.3, pages 426 till 445

Answers:

a. a - b - c

b. I_t of the closed cross-section d is larger than the I_t of the open cross-section a and b, but smaller than that of cross-section c.

Explanation:

(a) $I_t = \frac{1}{3} \cdot 2\pi \cdot (240\ \text{mm})(10\ \text{mm})^3 = 502,65 \times 10^3\ \text{mm}^4$

(b) $I_t = \frac{1}{3}\left\{(800\ \text{mm})(6\ \text{mm})^3 + (800\ \text{mm})(12\ \text{mm})^3\right\} = 518,4 \times 10^3\ \text{mm}^4$

(c) $I_t = \frac{1}{3}(1200\ \text{mm})(12\ \text{mm})^3 = 691,2 \times 10^3\ \text{mm}^4$

(d) $I_t = \frac{1}{4}\pi \cdot (70\ \text{mm})^3(2\ \text{mm}) = 538,78 \times 10^3\ \text{mm}^4$