Opmerkingen: Zie §3.2.2, blz. 88 t/m 90
Zie §3.2.4, voorbeeld 7, blz. 104 en 105

Antwoorden 3.21-1:

a. $I_{yy} = 432 \times 10^3 \text{ mm}^4$
b. $I_{yz} = -311{,}04 \times 10^3 \text{ mm}^4$

Antwoorden 3.21-2:

a. $I_{yy} = 276{,}48 \times 10^3 \text{ mm}^4$
b. $I_{yz} = 155{,}52 \times 10^3 \text{ mm}^4$

Antwoorden 3.21-3:

a. $I_{yy} = 1062{,}72 \times 10^3 \text{ mm}^4$
b. $I_{yz} = 0$

Toelichting 3.21-1: (maten in mm)

$$I_{yy} = \left\{\tfrac{1}{12} \times 60 \times 12^3 + 720 \times 12^2\right\} + \left\{\tfrac{1}{12} \times 12 \times 60^3 + 720 \times 12^2\right\}$$
$$I_{yz} = -2 \times \{720 \times 18 \times 12\}$$

Toelichting 3.21-2: (maten in mm)

maten in mm:
$$I_{yy} = \left\{\tfrac{1}{12} \times 60 \times 12^3 + 720 \times 6^2\right\} + \left\{\tfrac{1}{12} \times 12 \times 60^3 + 720 \times 6^2\right\}$$
$$I_{yz} = 2 \times \{720 \times 18 \times 6\}$$

Toelichting 3.21-3: (maten in mm)

maten in mm:
$$I_{yy} = 2 \times \left\{\tfrac{1}{12} \times 60 \times 12^3 + 720 \times 24^2\right\} + \left\{\tfrac{1}{12} \times 12 \times 60^3\right\}$$
$I_{yz} = 0$ vanwege spiegelsymmetrie