Remarks: See §3.1.3 pages 77 till 82
See §3.1.4, example 5, pages 87 till 90

Hints:
Divide each cross section in a number of rectangular parts and calculate for these parts the static moments separately.

Answers 3.7-1:

a. $A = 600\ \text{mm}^2$
b. $S_y = 0$
c. $y_C = 0$
d. $S_z = -3000\ \text{mm}^3$
e. $z_C = -5\ \text{mm}$

Answers 3.7-2:

a. $A = 102,4\times10^3\ \text{mm}^2$
b. $S_y = 17,408\times10^6\ \text{mm}^3$
c. $y_C = 170\ \text{mm}$
d. $S_z = 31,744\times10^6\ \text{mm}^3$
e. $z_C = 310\ \text{mm}$

Answers 3.7-3:

a. $A = 1600\ \text{mm}^2$
b. $S_y = 35\times10^3\ \text{mm}^3$
c. $y_C = 21,9\ \text{mm}$
d. $S_z = 39\times10^3\ \text{mm}^3$
e. $z_C = 24,4\ \text{mm}$

Answers 3.7-4:

a. $A = 24,3\times10^3\ \text{mm}^2$
b. $S_y = 607,5\times10^3\ \text{mm}^3$
c. $y_C = 25\ \text{mm}$
d. $S_z = 1336,5\times10^3\ \text{mm}^3$
e. $z_C = 55\ \text{mm}$