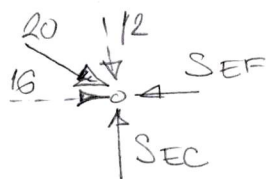


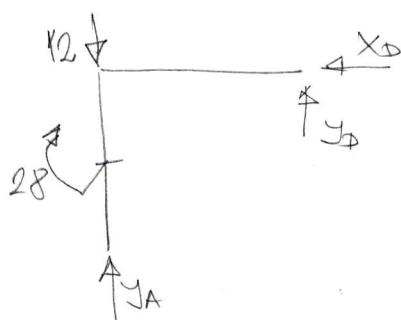
* Δeo C-E-F:



$$\boxed{S_{EF} = 16}$$

$$\boxed{S_{EC} = 12}$$

* Δeo A-D:

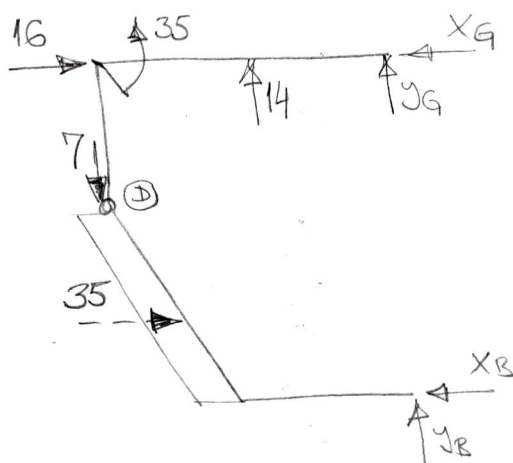


$$\sum F_x = 0: \boxed{X_D = 0}$$

$$\sum M_D^{+ \curvearrowright} = 0: Y_A \cdot 4 - 12 \cdot 4 + 28 = 0 \Rightarrow \boxed{Y_A = 5}$$

$$\sum F_y = 0: Y_A + Y_D = 12 \Rightarrow \boxed{Y_D = 7}$$

* Δeo B-D-G:



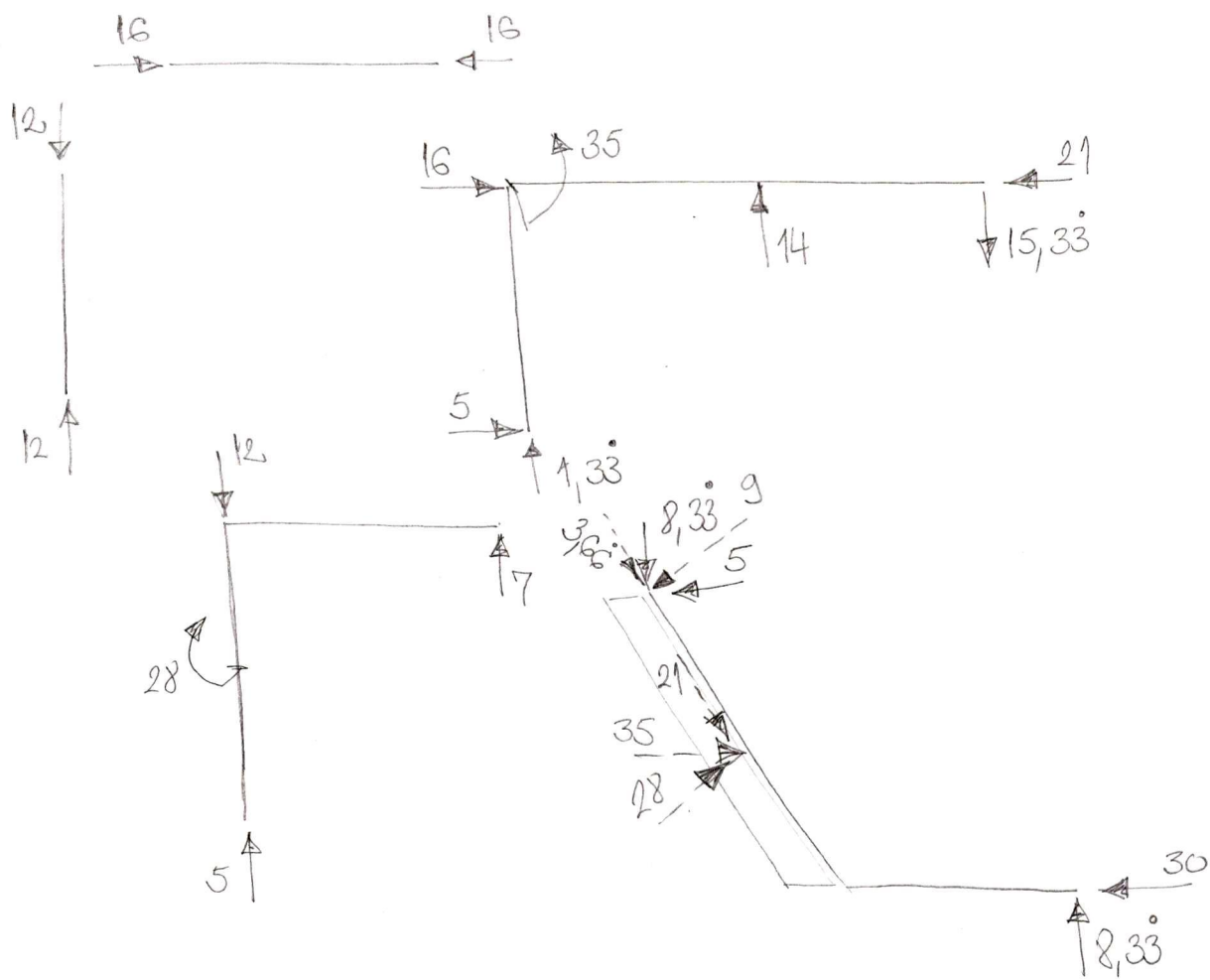
$$\sum M_G^{+ \curvearrowright} = 0: X_B \cdot 7 - 35 \cdot 5 - 7 \cdot 6 - 35 + 14 \cdot 3 = 0 \Rightarrow \boxed{X_B = 30}$$

$$\sum F_x = 0: \boxed{X_G = 21}$$

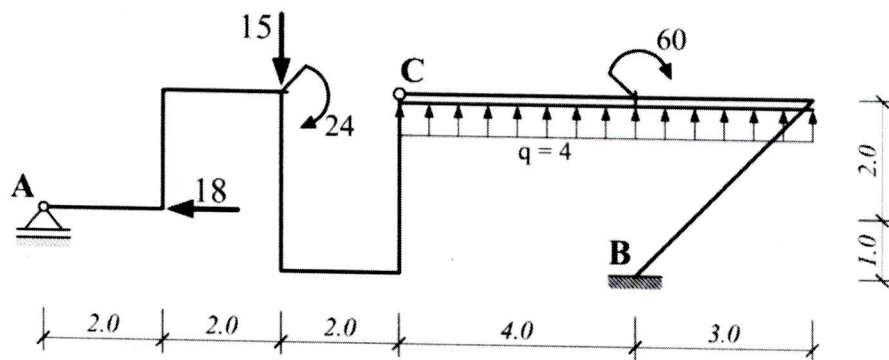
$$\sum M_D^{+ \curvearrowright} = 0: Y_B \cdot 6 + 35 \cdot 2 - X_B \cdot 4 = 0 \Rightarrow \boxed{Y_B = 8,33}$$

$$\sum F_y = 0: \boxed{Y_G = -15,33}$$

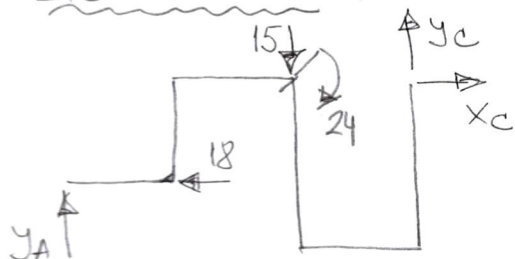
* РЕКАПУЛАЦИЯ *



2.



ЧЕД А-С:



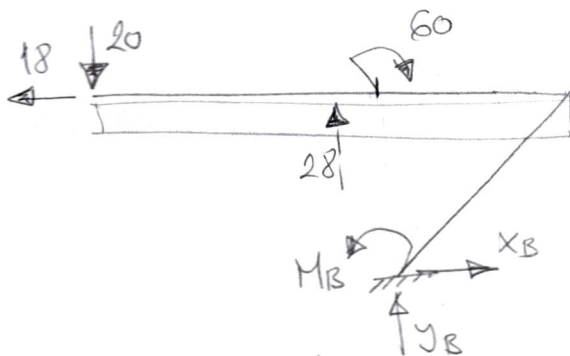
$$\sum F_x = 0: X_C = 18$$

$$\sum M_C = 0: Y_A \cdot 6 + 18 \cdot 2 - 15 \cdot 2 + 24 = 0$$

$$Y_A = -5$$

$$\sum F_y = 0: Y_C = 20$$

ЧЕД С-В:



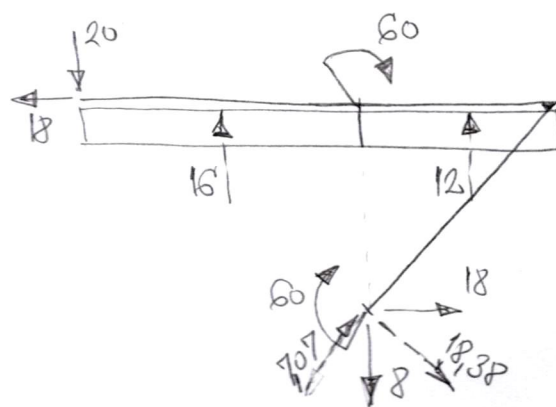
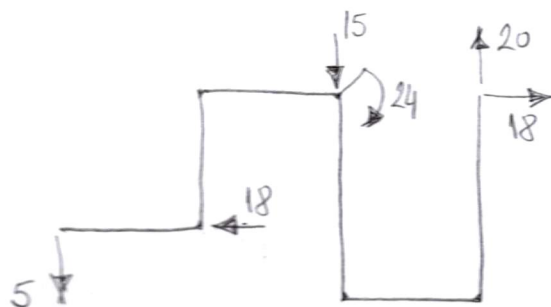
$$\sum F_x = 0: X_B = 18$$

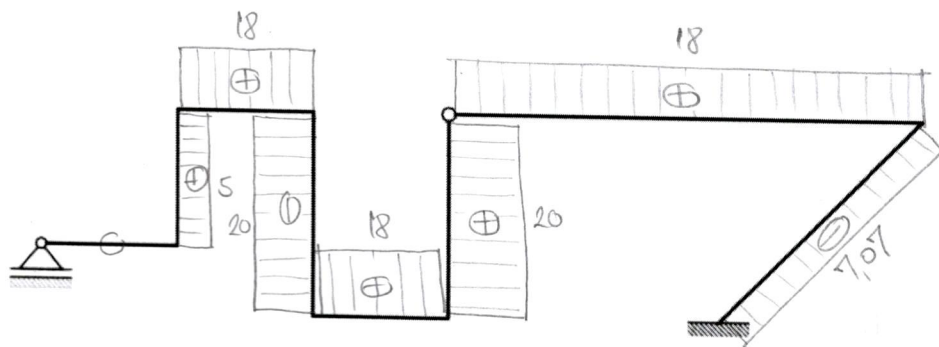
$$\sum F_y = 0: Y_B = -8$$

$$\sum M_B = 0: M_B - 60 - 28 \cdot 0.5 + 20 \cdot 4 + 18 \cdot 3 = 0$$

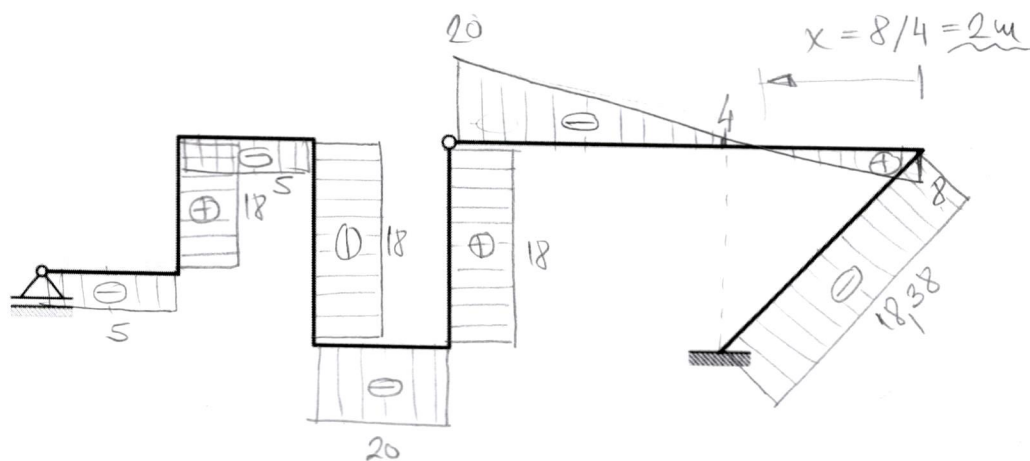
$$M_B = -60$$

* РЕКАПИТУЛЯЦІЯ *

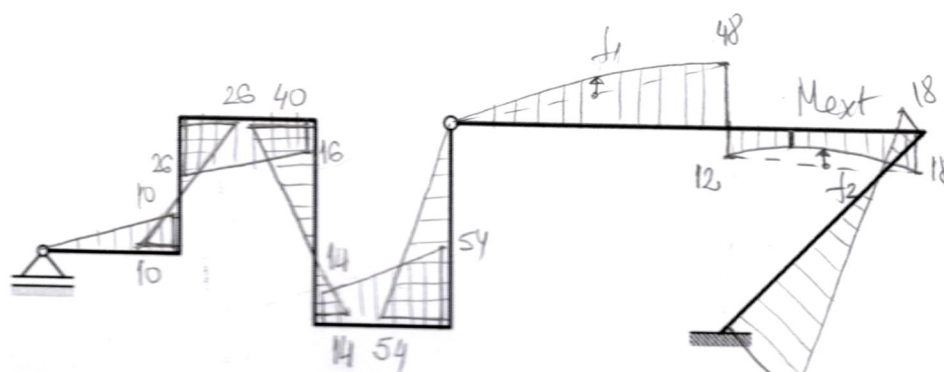




N



T



M

$$f_1 = \frac{4 \cdot 4^2}{8} = 8$$

$$f_2 = \frac{4 \cdot 3^2}{8} = 4.5$$

$$M_{\text{ext}} = 18 - \frac{8 \cdot 2}{2} = 10 \text{ kNm}$$

3.

