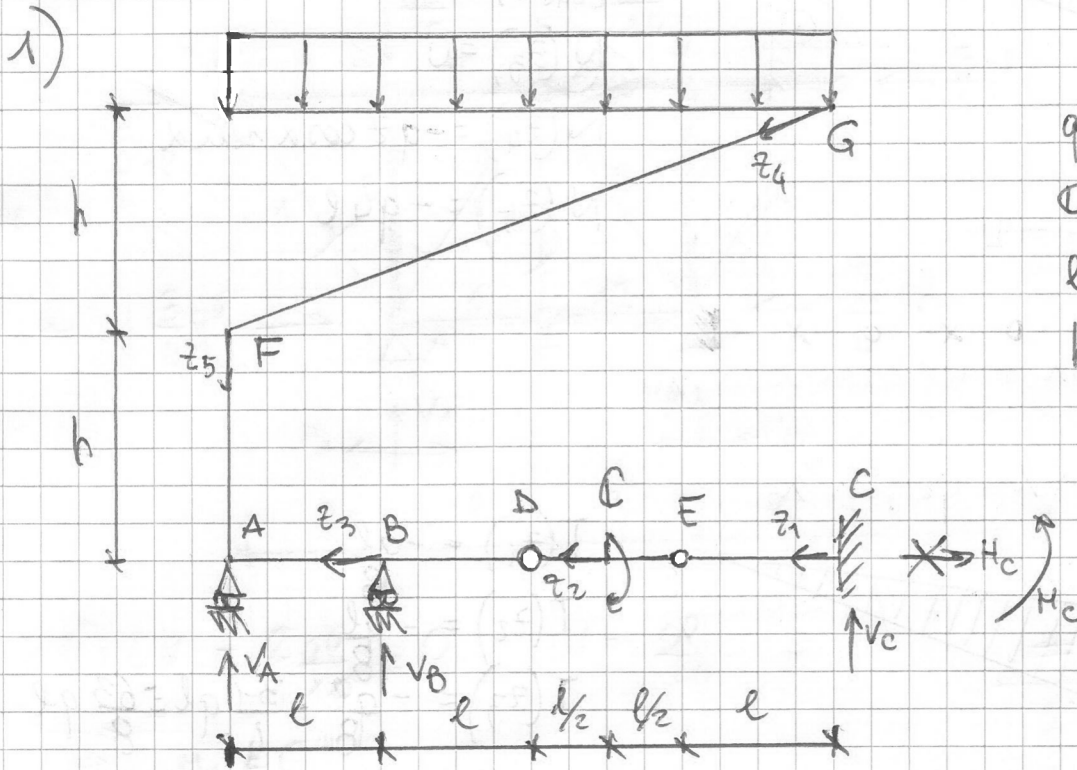




$$q = 1000 \text{ N/m}$$

$$C = 500 \text{ N/m} = \frac{ql^2}{8}$$

$$l = 2 \text{ m}$$

$$h = 3 \text{ m} = \frac{3l}{2}$$

$$\tan \alpha = \frac{3}{4}$$

$$\alpha = 36.87^\circ$$

D) AUS.

$$V_C \cdot l + M_C = 0$$

E) AUS

$$V_C \cdot 2l + M_C - \frac{ql^2}{8} = 0$$

$$V_C \cdot l - \frac{ql^2}{8} = 0$$

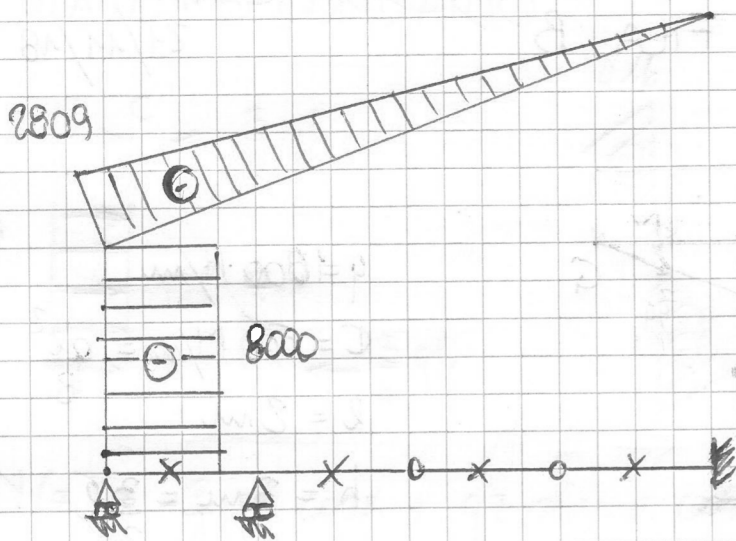
$$V_C = \frac{ql}{8} \quad M_C = -\frac{ql^2}{8}$$

$$A) -4ql \cdot 2l + V_B \cdot l - \frac{ql^2}{8} + \frac{ql}{8} \cdot 4l - \frac{ql^2}{8} = 0$$

$$V_B = 8ql + \frac{ql}{8} - \frac{ql}{2} + \frac{ql}{8} = \frac{31}{4} ql$$

$$\uparrow) -4ql + V_A + \frac{31}{4} ql + \frac{ql}{8} = 0$$

$$V_A = 4ql - \frac{31}{4} ql - \frac{ql}{8} = \frac{31}{8} ql$$



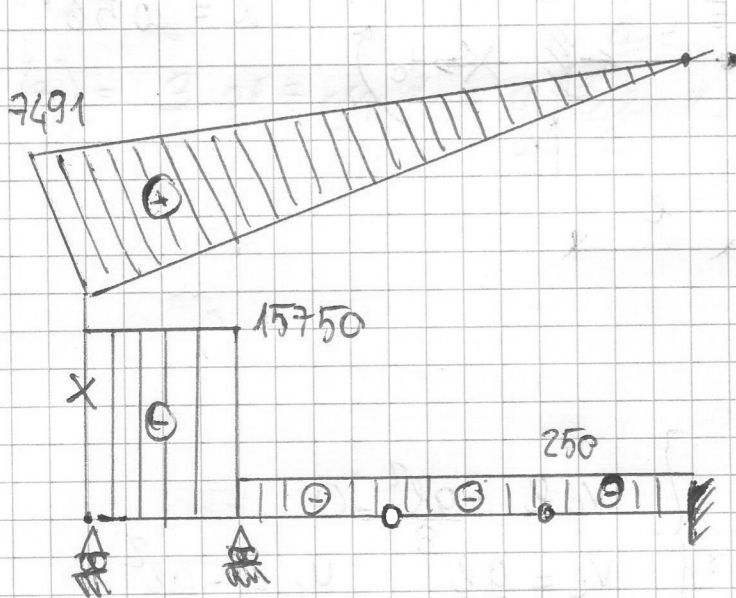
$$N(z_1) = 0$$

$$N(z_2) = 0$$

$$N(z_3) = 0$$

$$N(z_4) = -qz \cos \alpha \text{ and}$$

$$N(z_5) = -ql$$



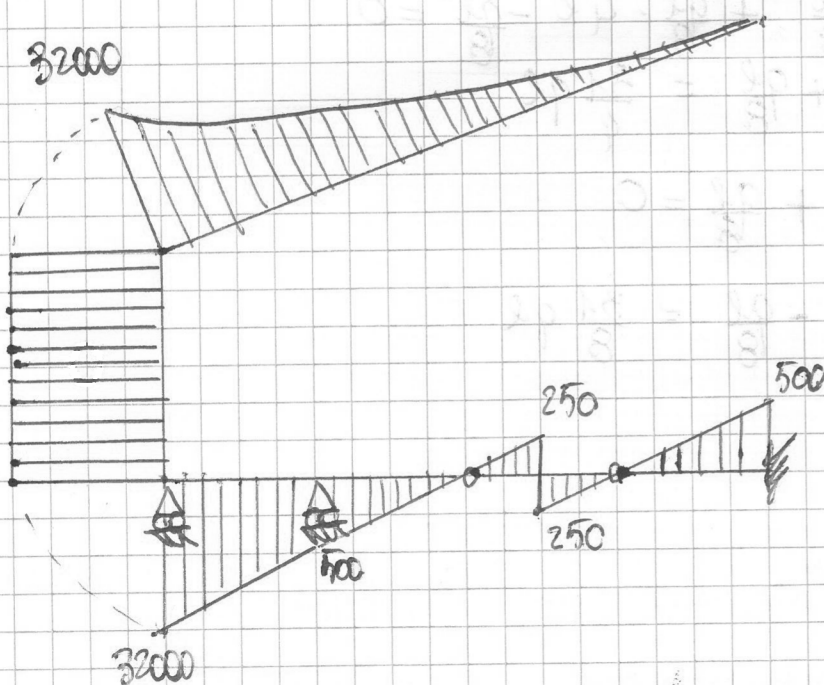
$$T(z_1) = -\frac{ql}{8}$$

$$T(z_2) = -\frac{ql}{8}$$

$$T(z_3) = -\frac{ql}{8} - \frac{31}{4}ql = \frac{63}{8}ql$$

$$T(z_4) = qz \cos \alpha$$

$$T(z_5) = 0$$



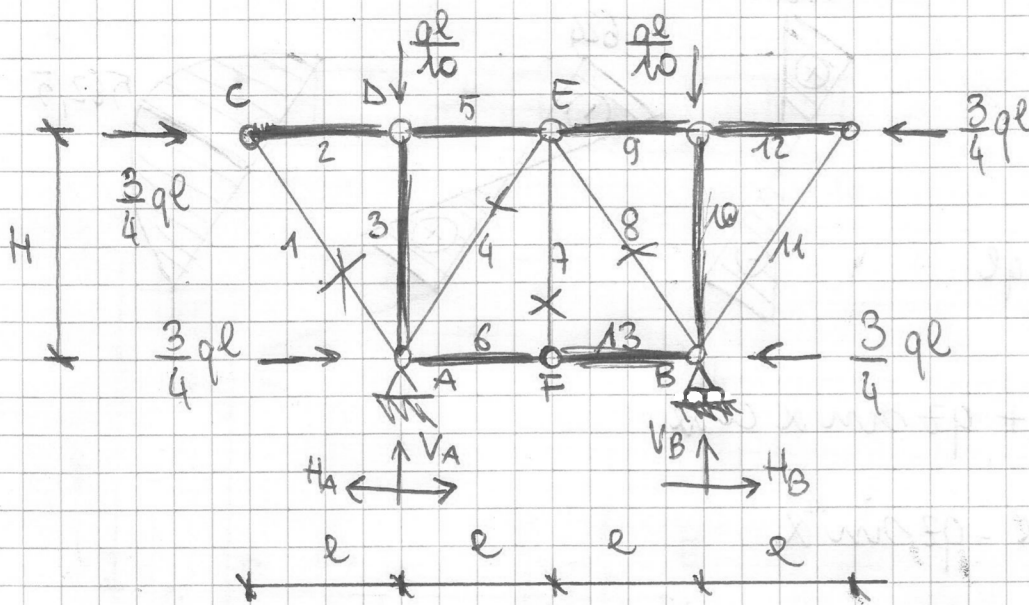
$$M(z_1) = -\frac{ql^2}{8} + \frac{ql}{8}z$$

$$M(z_2) = -\frac{ql^2}{8} - \frac{ql^2}{8} + \frac{ql}{8}\left(\frac{3}{2}l + z\right)$$

$$= -\frac{ql^2}{4} + \frac{ql}{8}\left(\frac{3}{2}l + z\right)$$

$$M(z_3) = -\frac{ql^2}{8} + \frac{ql}{8}\left(\frac{3}{2}l + z\right)$$

2) STATO PRIMARIO



$$q = 500 \text{ N/m}$$

$$P = 100 \text{ N} = \frac{ql}{10}$$

$$l = 2 \text{ m}$$

$$H = 3 \text{ m} = \frac{3l}{2}$$

$$\tan \alpha = 3/2$$

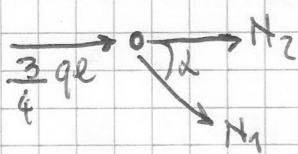
$$\alpha = 56,31^\circ$$

$$\uparrow) 2V - 2\frac{ql}{10} = 0$$

$$V = \frac{ql}{10}$$

$$\rightarrow) H_A = 0$$

NODO C



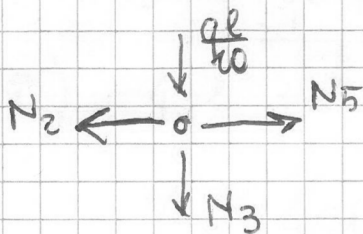
$$\uparrow) N_1 = 0$$

$$\rightarrow) N_2 + \frac{3}{4} ql = 0$$

$$N_2 = -\frac{3}{4} ql$$

#	$N_i [\text{N}]$
1	0
2	-750
3	-100
4	0
5	-750
6	-750
7	0
8	0
9	-750
10	-100
11	0
12	-750
13	-750

NODO D

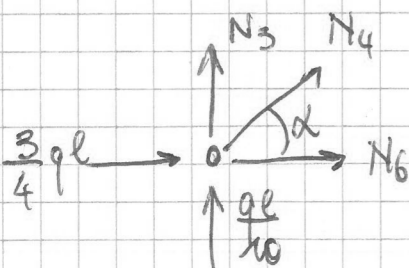


$$\rightarrow) -N_2 + N_5 = 0$$

$$N_5 = N_2 = -\frac{3}{4} ql$$

$$\uparrow) -\frac{ql}{10} - N_3 = 0 \quad N_3 = -\frac{ql}{10}$$

NODO A

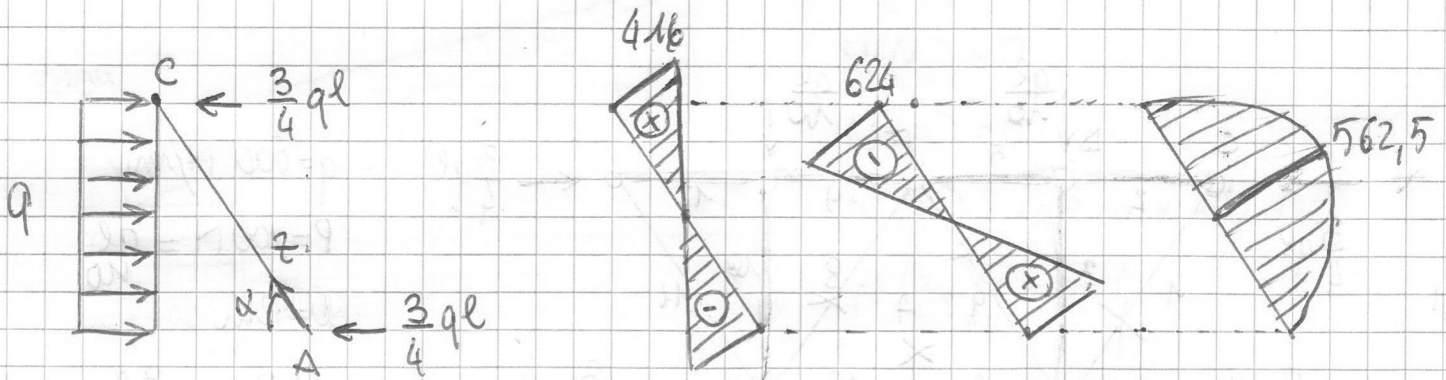


$$\uparrow) \frac{ql}{10} + N_3 + N_4 \sin \alpha = 0$$

$$N_4 \sin \alpha = 0 \quad N_4 = 0$$

$$\rightarrow) \frac{3}{4} ql + N_6 = 0 \quad N_6 = -\frac{3}{4} ql$$

STATO SECONDARIO



$$N(z) = -\frac{3}{4} ql \cos \alpha + qz \sin \alpha \cos \alpha$$

$$T(z) = \frac{3}{4} ql \sin \alpha - qz \sin^2 \alpha$$

$$M(z) = \frac{3}{4} ql z \sin \alpha - \frac{q}{2} (z \sin \alpha)^2$$