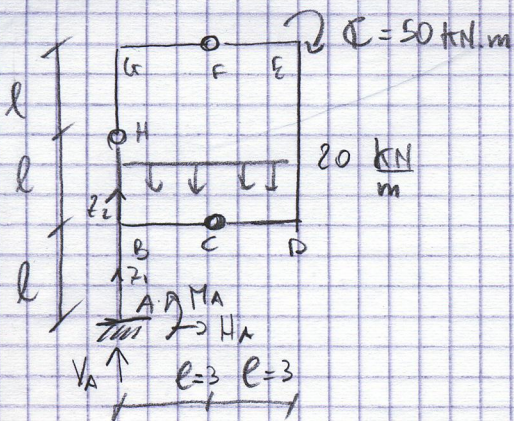


21/02/2012

FILA (A)

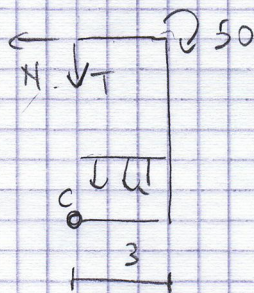
(1)



$$\uparrow) V_A - 20 \cdot 6 = 0 \Rightarrow V_A = 120$$

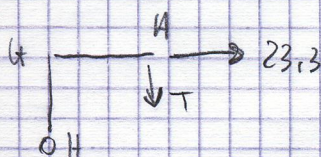
$$\rightarrow) H_A = 0$$

$$A \curvearrowright) -50 - 360 + M_A = 0 \Rightarrow M_A = 410$$

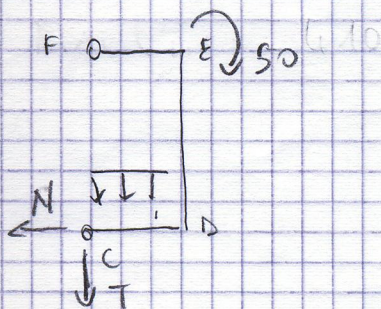


$$C \curvearrowright) -50 - 90 + N \cdot 6 = 0$$

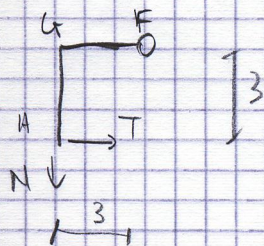
$$\Rightarrow N = 23,3$$



$$H \curvearrowright) (-23,3 \times 3) - T \cdot 3 = 0 \Rightarrow T = -23,3$$



$$F \curvearrowright) -N \cdot 6 - 50 - 90 = 0 \Rightarrow N = -23,3$$



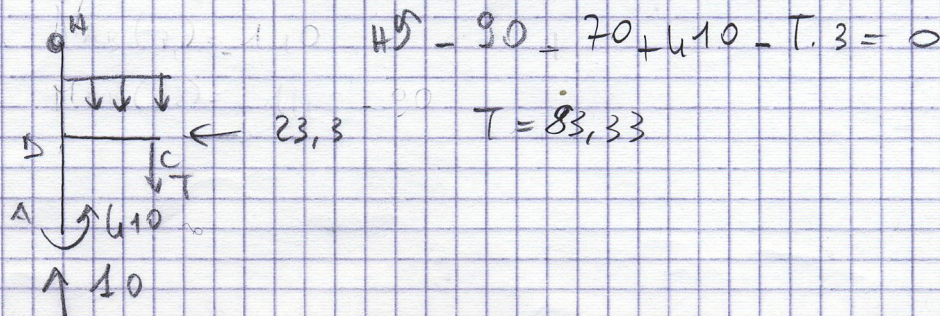
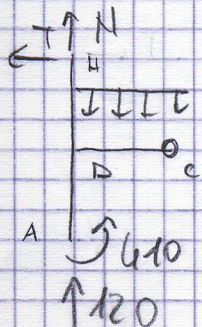
$$F \curvearrowright) T \cdot 3 + N \cdot 3 = 0 \Rightarrow T = -N$$

$$C \curvearrowright) 410 - 360 + 90 + T \cdot 3 - N \cdot 3 = 0$$

$$T \cdot 3 - N \cdot 3 = -140$$

$$\Rightarrow -6N = -140 \Rightarrow N = 23,3$$

$$T = -23,3$$



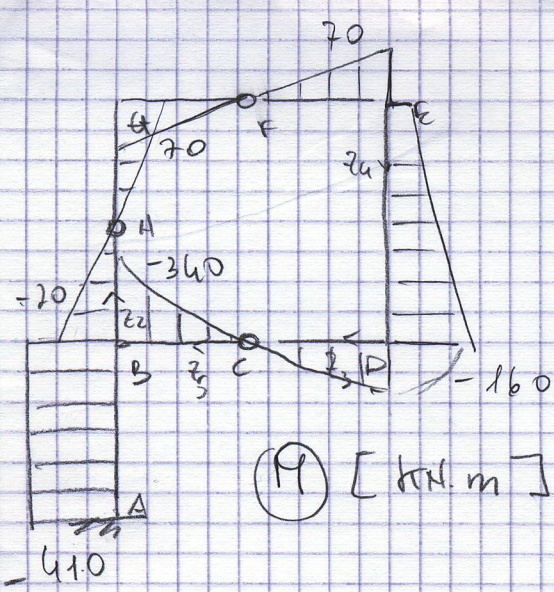
$$H \curvearrowright) -90 - 70 + 410 - T \cdot 3 = 0$$

$$T = 83,33$$

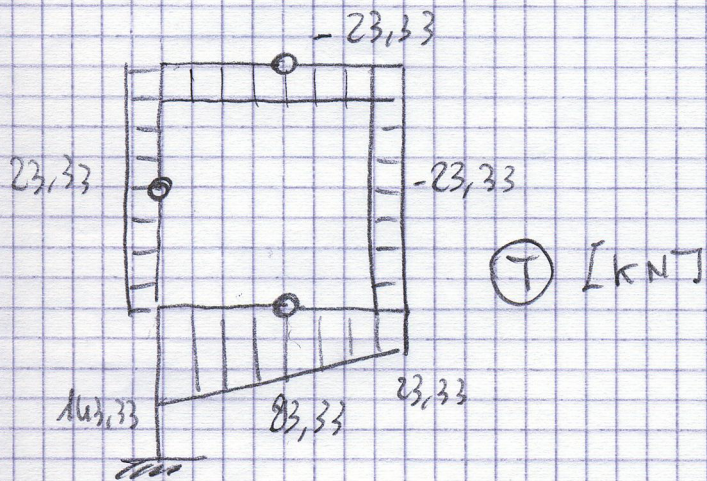
$$M_{ED}(z_1) = -70 + 50 - 23,3 \cdot z$$

$$M_{DC}(z_2) = 160 - 23,3 \cdot z - 10 \cdot z^2$$

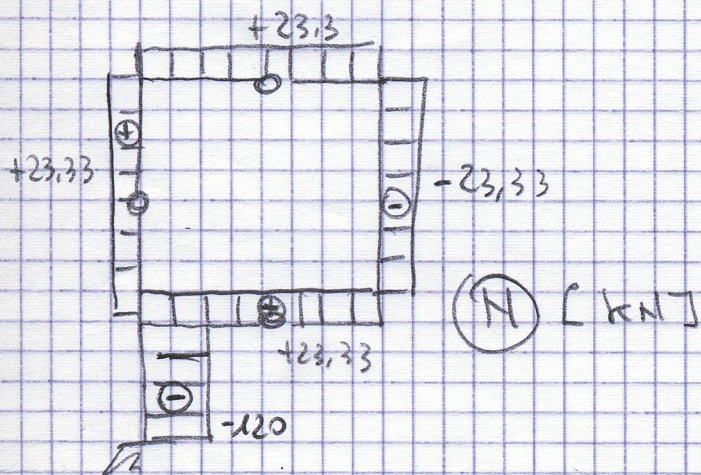
$$M_{BC}(z_3) = -83,3 \cdot z_3 - 10 \cdot z_3^2$$



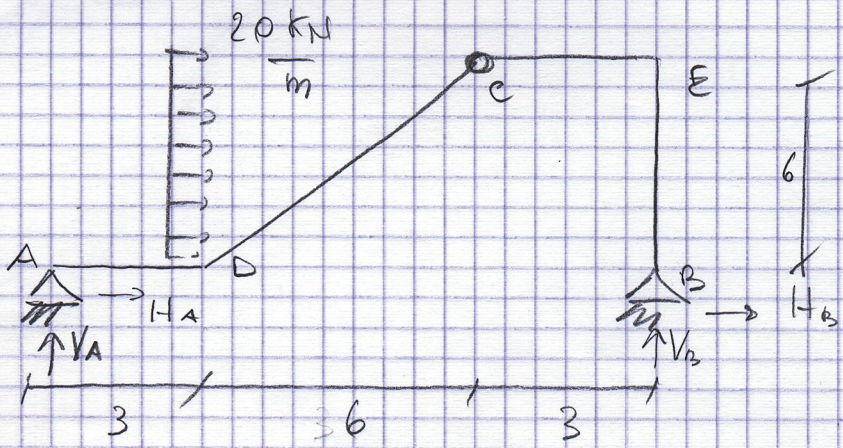
(M) [kN.m]



(T) [kN]



(N) [kN]



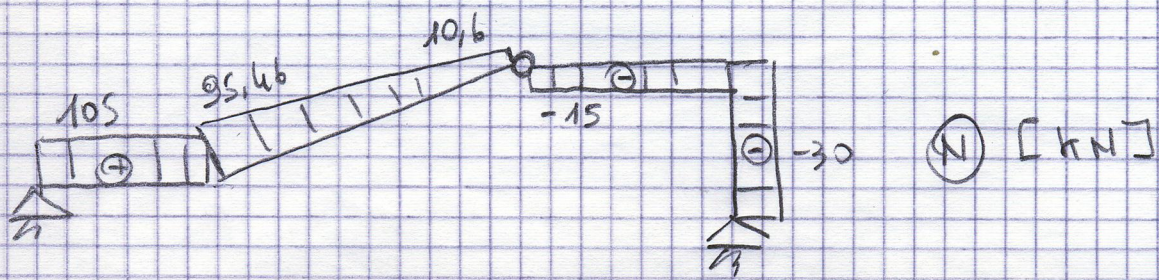
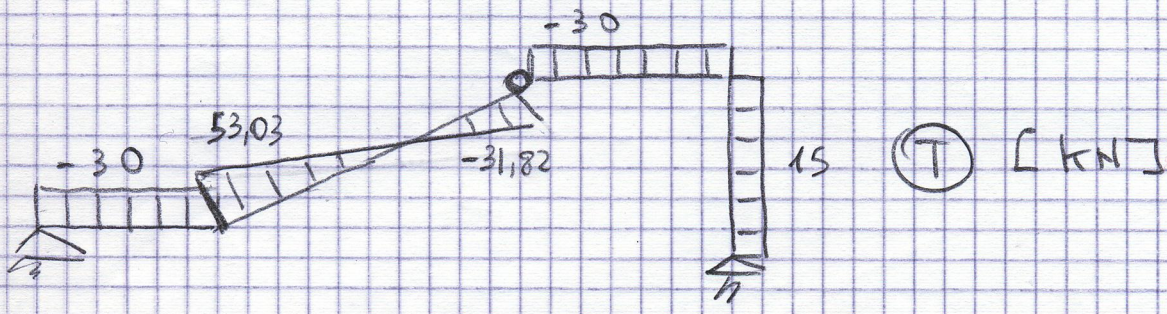
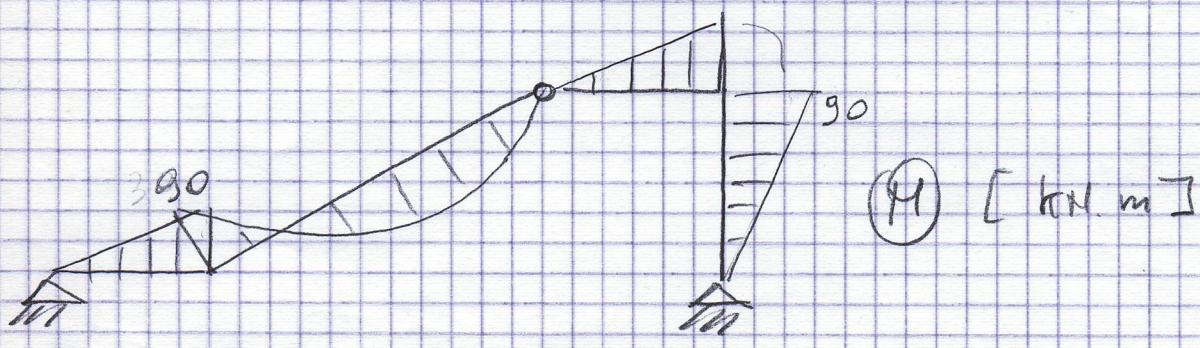
$\uparrow) V_A + V_B = 0$

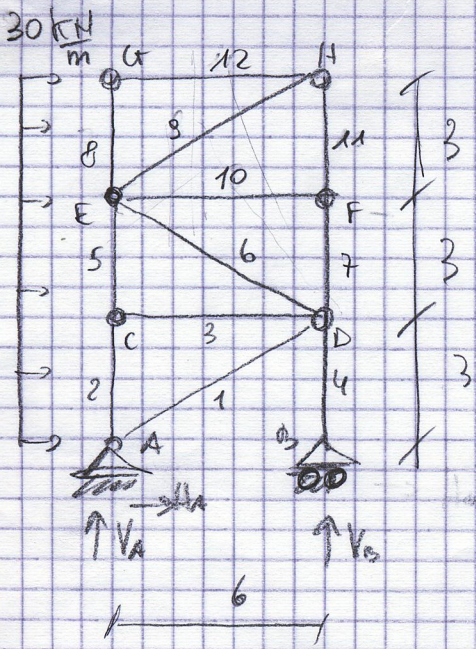
$\rightarrow) H_A + H_B + 120 = 0$

$\curvearrowright_{CEB} V_B \cdot 3 + H_B \cdot 6 = 0 \Rightarrow V_B = -2H_B$

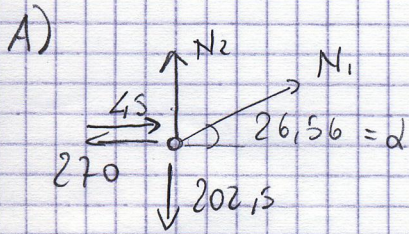
$\uparrow) V_B \cdot 12 - 360 = 0 \Rightarrow V_B = 30 \Rightarrow V_A = -30$

$\Rightarrow H_B = -\frac{V_B}{2} = -15 \Rightarrow H_A = -120 + 15 = -105$

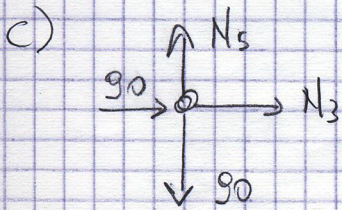




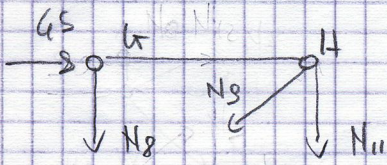
$$\begin{aligned} \uparrow) V_A + V_B &= 0 \\ \rightarrow) H_A &= -270 \\ \uparrow) V_B \times 6 - 1215 &= 0 \\ \rightarrow) V_B &= 202,5 \\ V_A &= -202,5 \end{aligned}$$



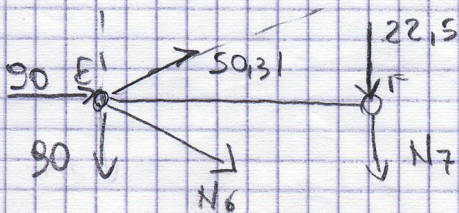
$$\begin{aligned} \uparrow) N_1 \sin \alpha + N_2 - 202,5 &= 0 \\ \rightarrow) N_1 \cos \alpha - 270 &= 0 \Rightarrow N_1 = \frac{270}{\cos \alpha} = 251,56 \\ \rightarrow) N_2 &= 89,99 \approx 90 \end{aligned}$$



$$\begin{aligned} \uparrow) N_5 &= 90 & N_4 &= -202,5 \\ \rightarrow) N_3 &= -90 \end{aligned}$$



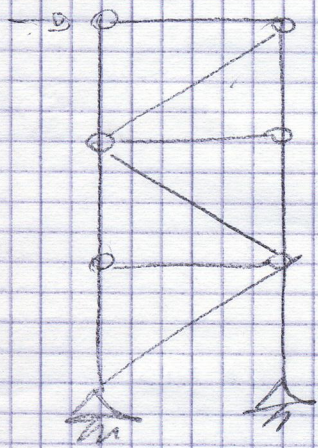
$$\begin{aligned} \uparrow) -N_8 - N_{10} - N_9 \sin \alpha &= 0 \\ \rightarrow) N_9 \cos \alpha = 45 \Rightarrow N_9 &= 50,31 \\ \uparrow) N_8 &= 0 & N_{12} &= -45 \\ N_{10} &= -22,5 \end{aligned}$$



$$\begin{aligned} \uparrow) 50,31 \sin \alpha - 90 - N_6 \sin \alpha - 22,5 - N_7 &= 0 \\ \rightarrow) N_6 \cos \alpha + 50,31 \cos \alpha + 90 &= 0 \\ N_6 &= -150,93 & N_{10} &= 0 \\ N_7 &= -22,5 \end{aligned}$$

	1	2	3	4	5	6	7	8	9	10	11	12
N	251,56	90	-90	-202,5	90	-150,93	-22,5	0	50,31	0	-22,5	-45

Calo N per sistema fissato



	1	2	3	4	5	6	7	8	9	10	11	12
N	1,12	1	0	-1,5	1	-1,12	-0,5	0	1,12	0	-0,5	-1

SA or VE
S or VE