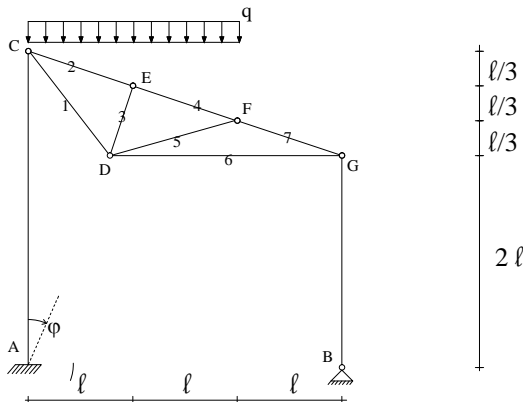


Prova Totale di Scienza delle Costruzioni I

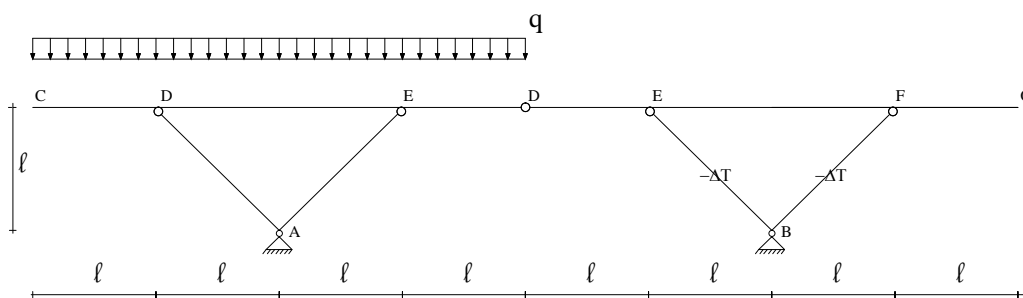
27/01/2014



Dati:

$l = 2\text{ m}$ $q = 20\text{ kN/m}$

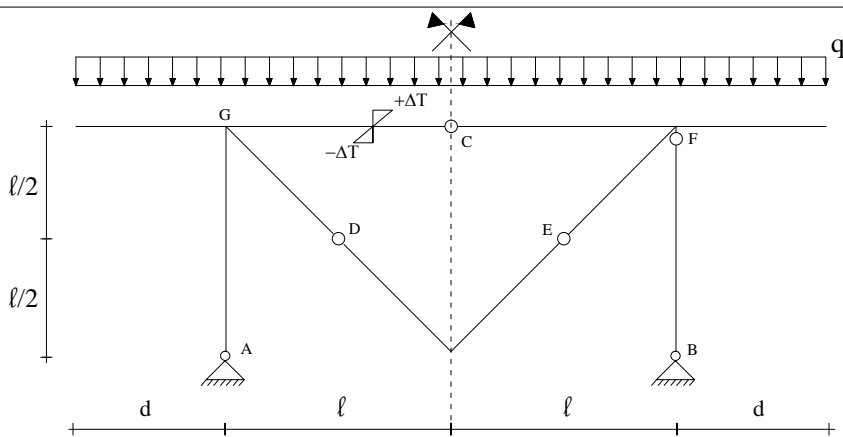
- Calcolare e disegnare le azioni interne N, T, M ;
- Calcolare lo spostamento orizzontale del nodo G in presenza della rotazione $\varphi = 0,3^\circ$; considerare la deformabilità assiale.



Dati:

$l = 3\text{ m}$ $\alpha = 1,2 \times 10^{-5} \text{ }^\circ\text{C}^{-1}$
 $q = 30\text{ kN/m}$ $-\Delta T = 50^\circ$

- Calcolare e disegnare le azioni interne N, T, M ;
- Calcolare la rotazione relativa del nodo D considerando la presenza del carico termico $-\Delta T$

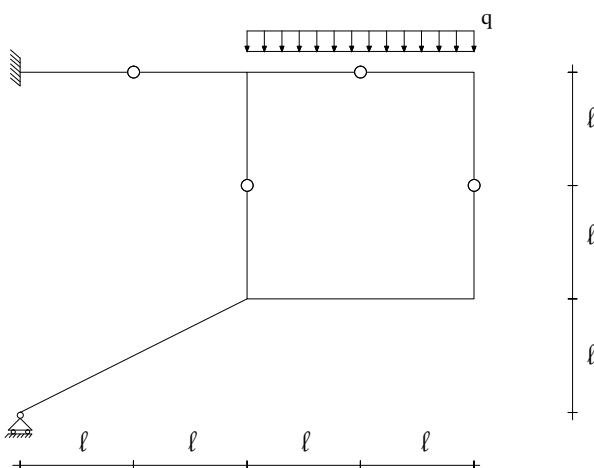


Dati:

$l = 3\text{ m}$ $\alpha = 1,2 \times 10^{-5} \text{ }^\circ\text{C}^{-1}$
 $d = 2\text{ m}$ $\Delta T = 50^\circ$
 $q = 20\text{ kN/m}$

- Calcolare e disegnare le azioni interne N, T, M ;
- Calcolare l'abbassamento v_c trascurando la deformabilità assiale delle travi e considerando il carico termico sul tratto GCF

Per la risoluzione della struttura considerare la simmetria dei carichi e delle reazioni vincolari



Dati:

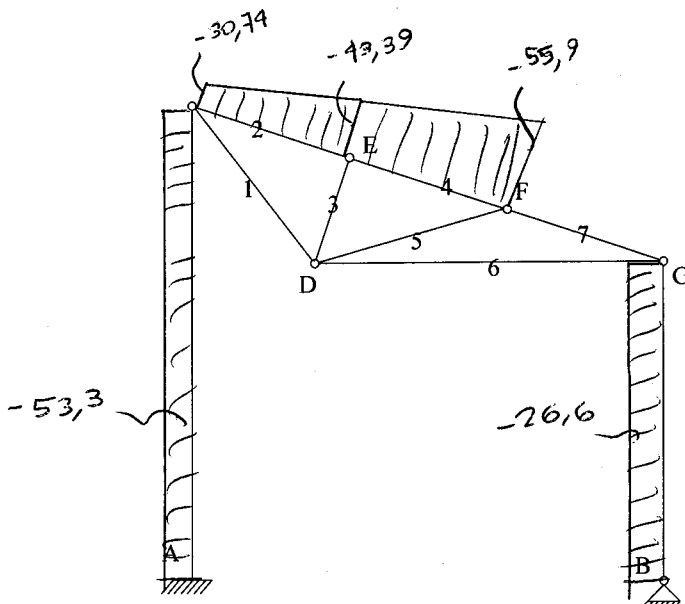
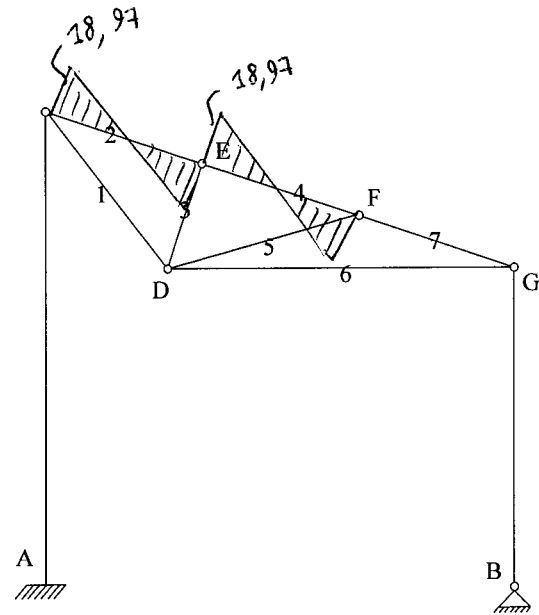
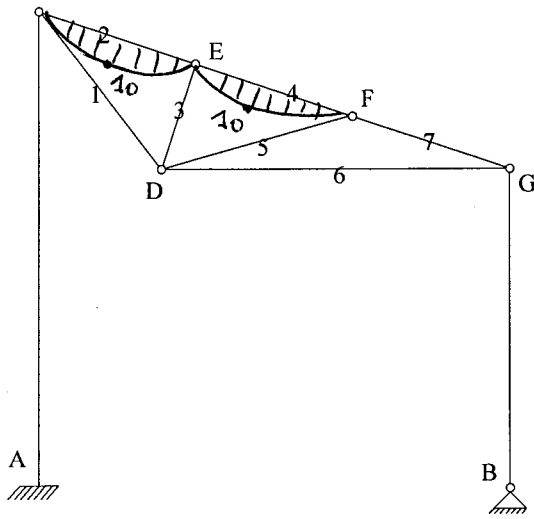
$l = 2\text{ m}$
 $q = 30\text{ kN/m}$

- Calcolare e disegnare le azioni interne N, T, M ;

$V_A = 53,3 \text{ KN}$
 $V_B = 26,6 \text{ KN}$

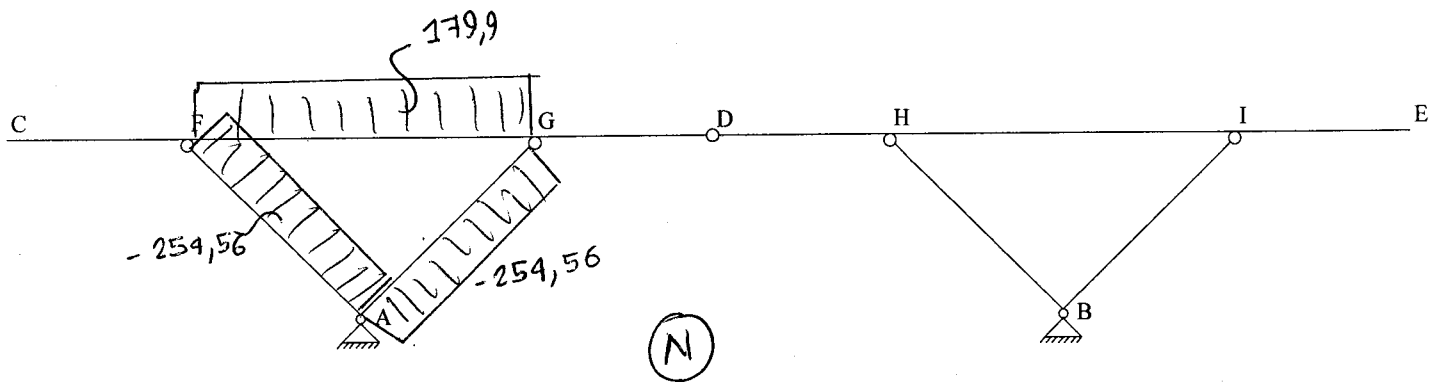
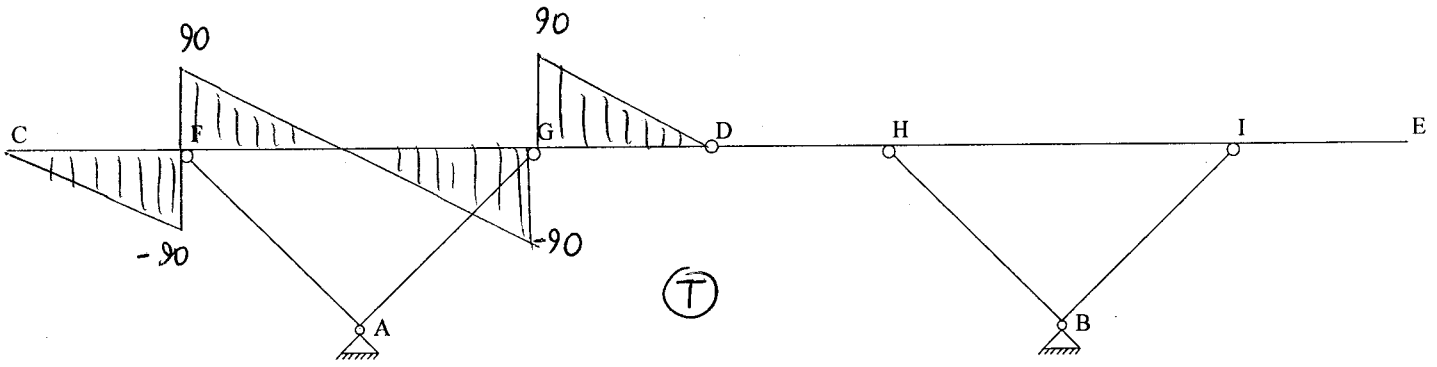
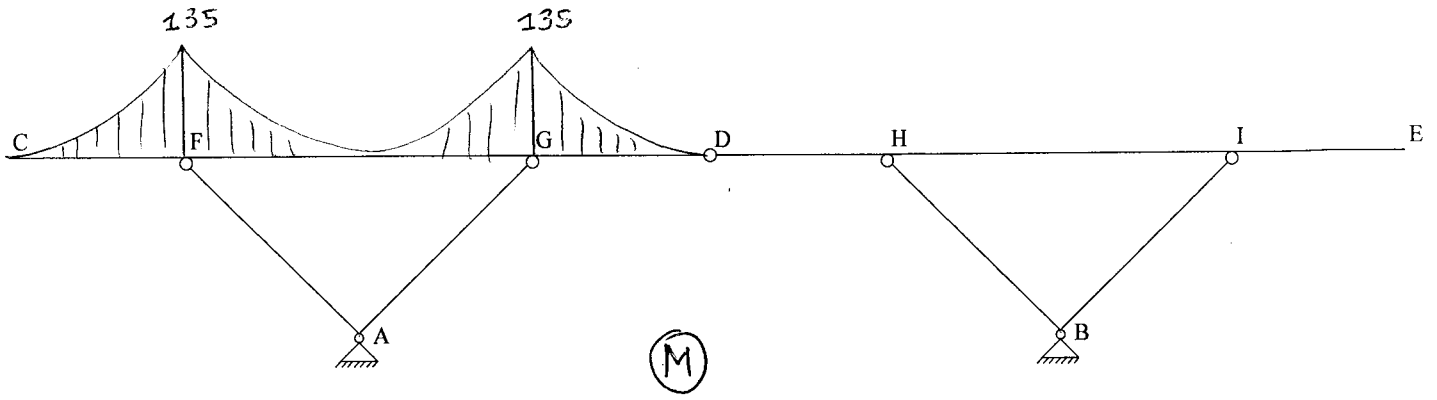
Esercizio 1 FILA A 27/01/2014

(M)
 [KNm]

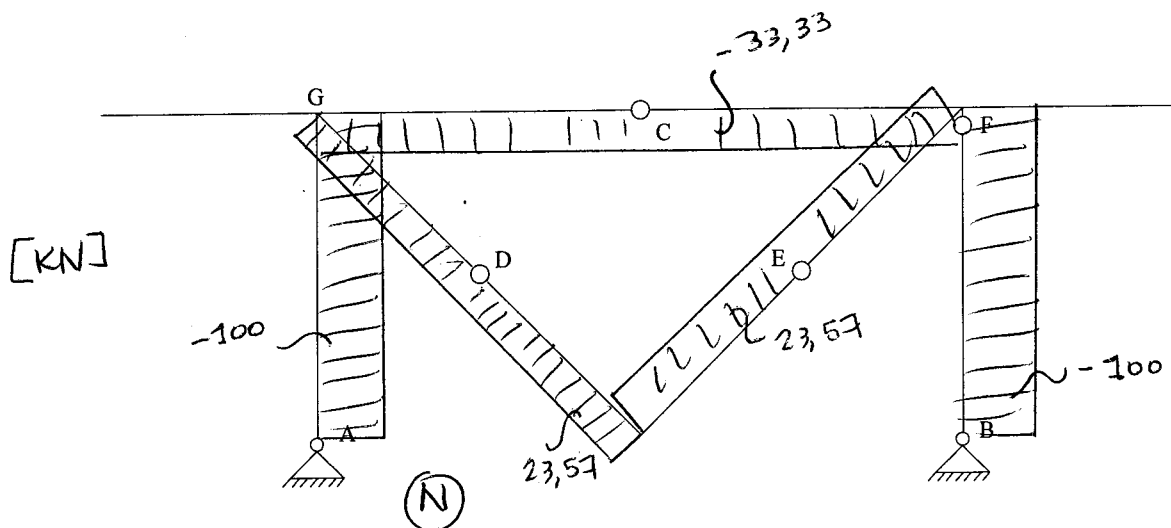
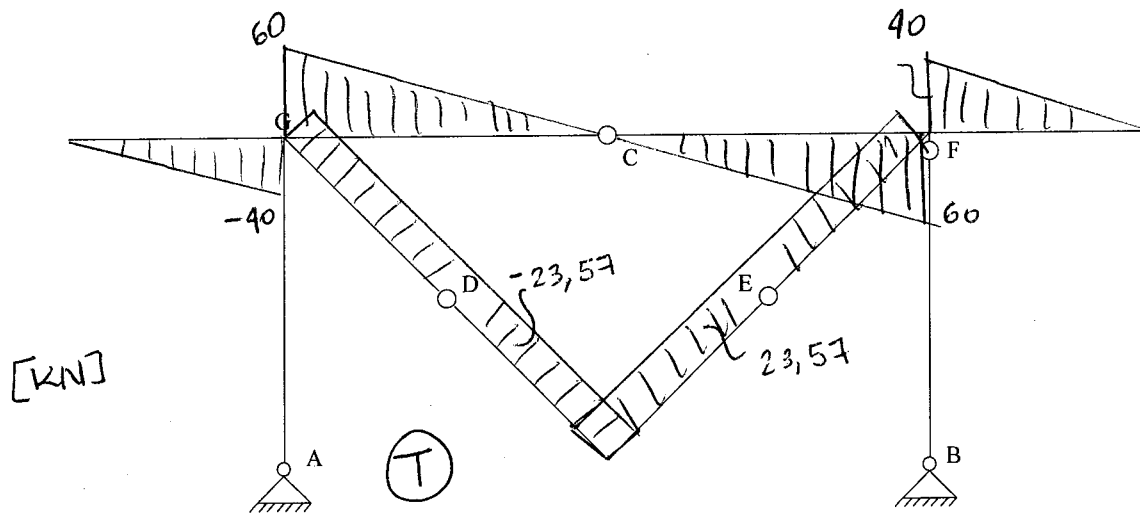
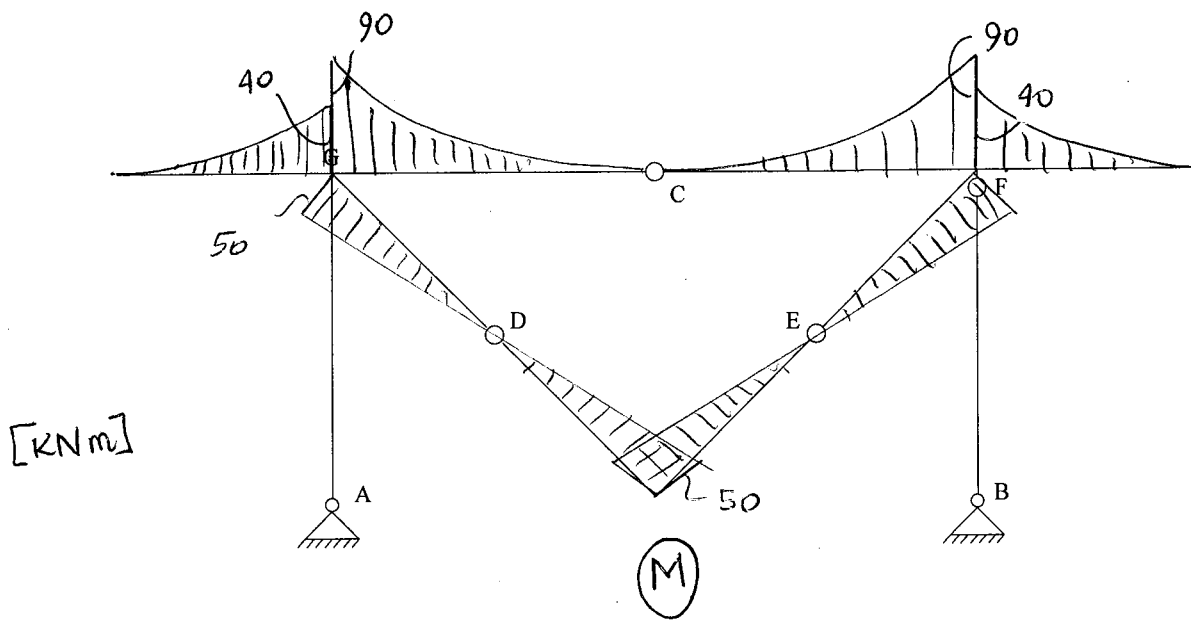


ASTA	[KN]
1	57,15
2	
3	-37,95
4	
5	-34,18
6	80
7	-84,32

$$V_A = 360 \text{ kN}$$



$$V_A = V_B = 100 \text{ kN}$$

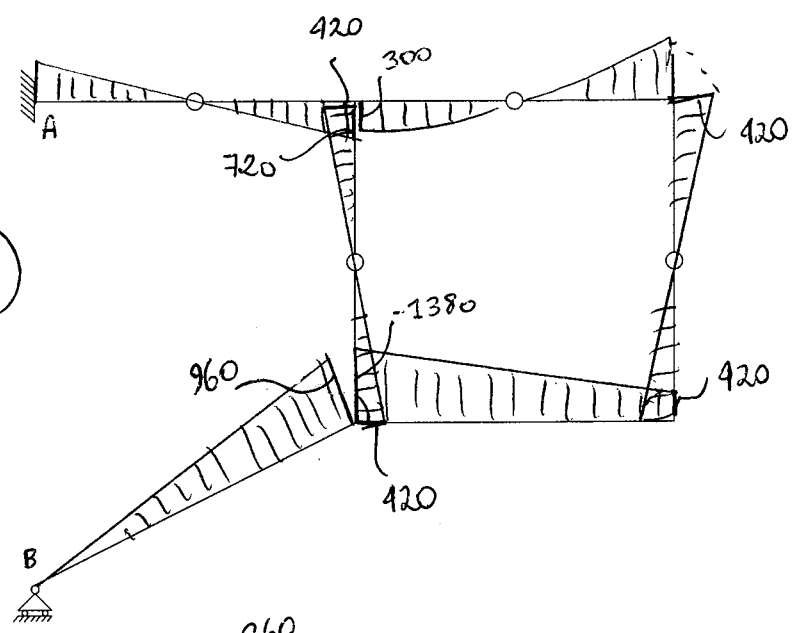


$$V_A = 360$$

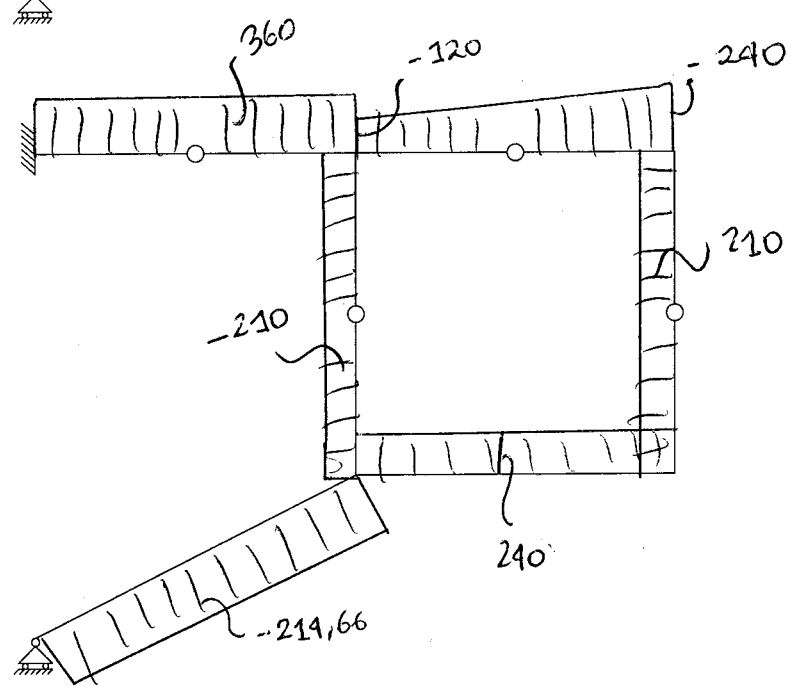
$$V_B = -240$$

$$M_A = +720$$

(M)



(T)



(N)

