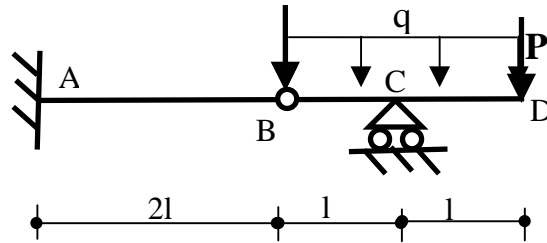
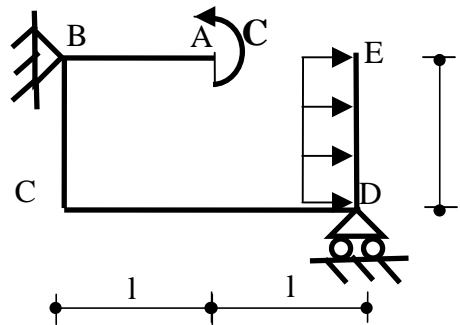


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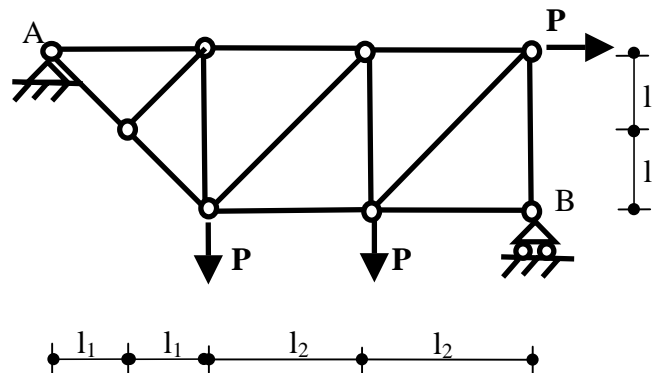
- 1) Disegnare i diagrammi quotati delle azioni interne (N, T, M) per $l=1$ m, $q=2000$ kg/m, $P=1$ t.



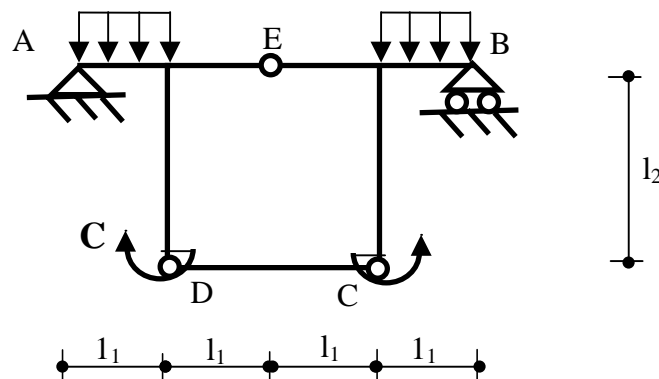
- 2) Disegnare i diagrammi quotati delle azioni interne (N, T, M) per $l=1$ m, $q=2000$ kg/m, $C=1$ tm.

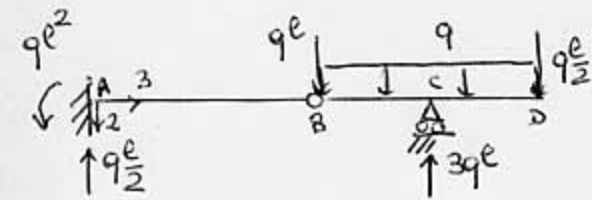
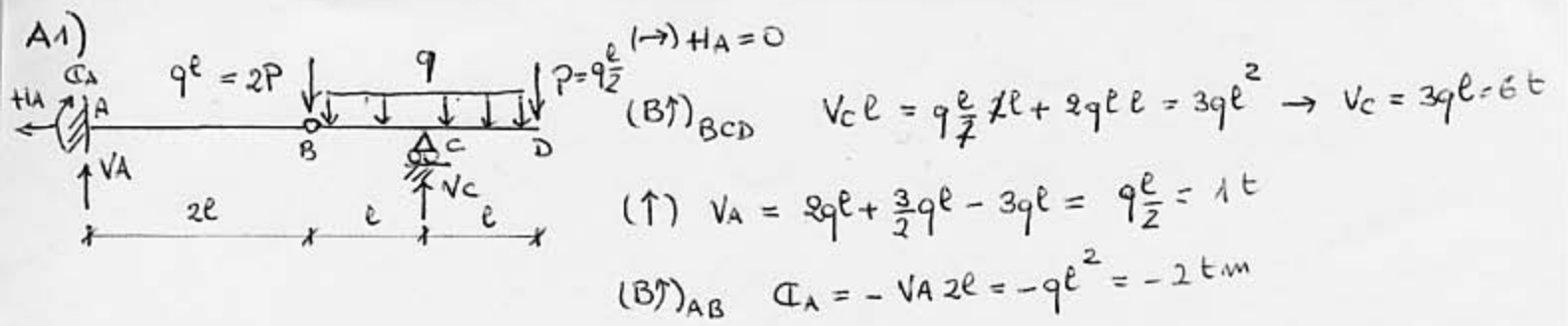


- 3) Calcolare lo stato di sollecitazione per $l_1=0.5$ m, $l_2=1$ m, $P=1$ t.

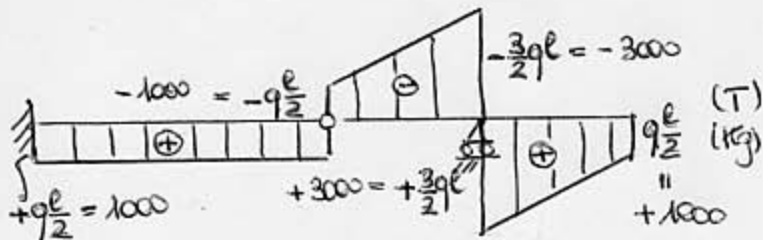
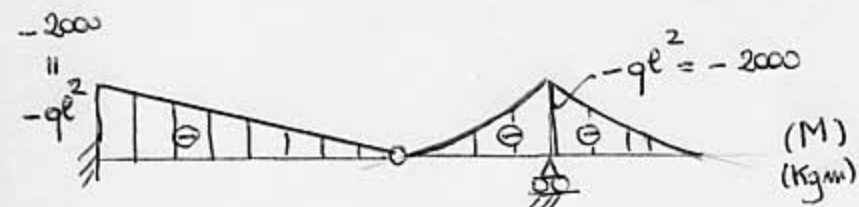


- 4) Disegnare i diagrammi quotati di (N,T,M) per $l_1=0.5$ m, $l_2=1$ m, $C=1$ tm, $q=2000$ kg/m.





Diagrammi di (M, T, N):



$N = 0$

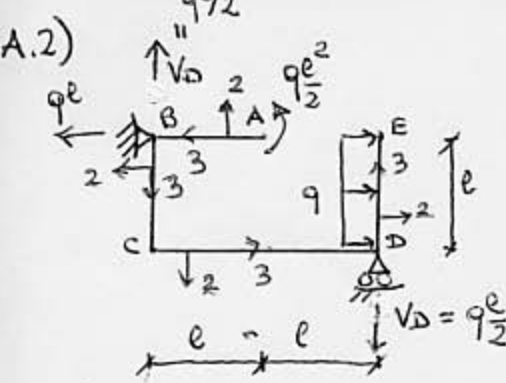
Equilibrio in B:

Equilibrio di BC:

$T_C = -\frac{3}{2}q^l$

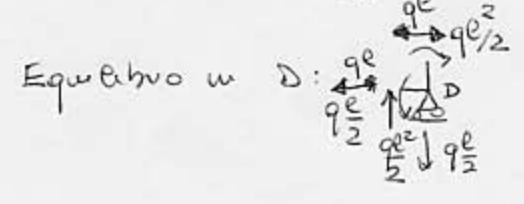
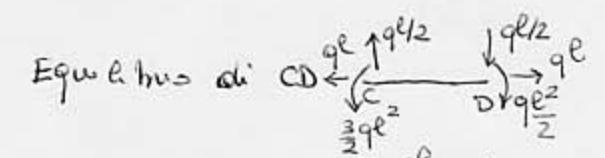
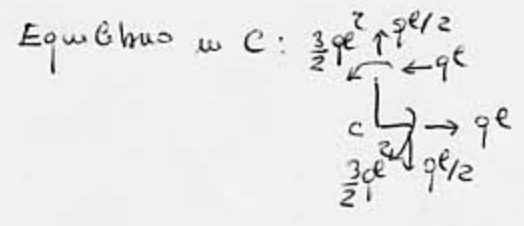
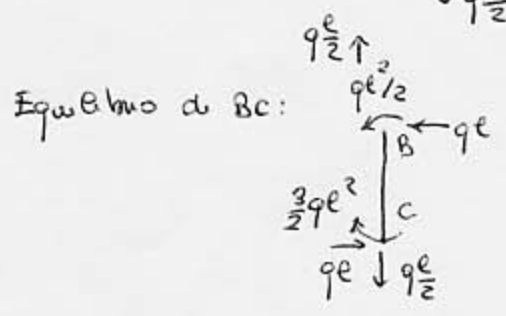
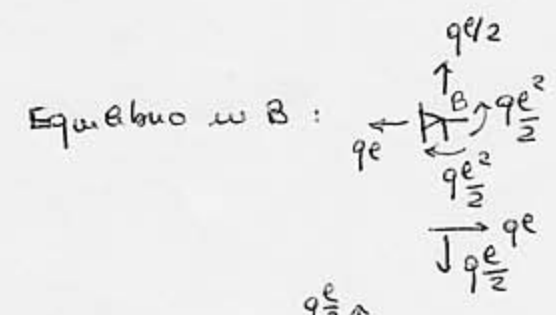
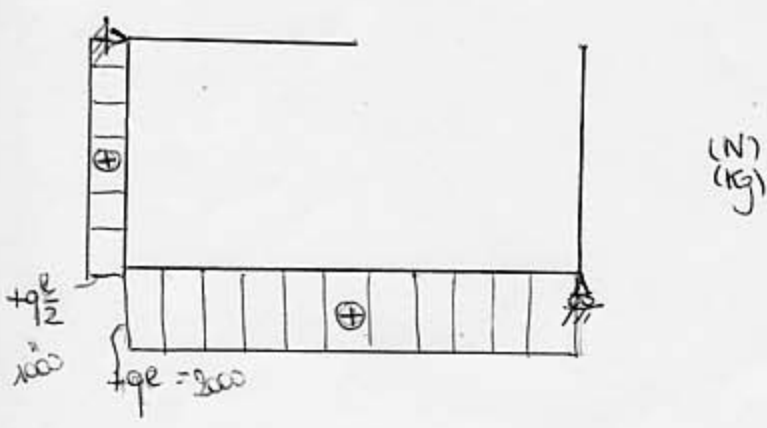
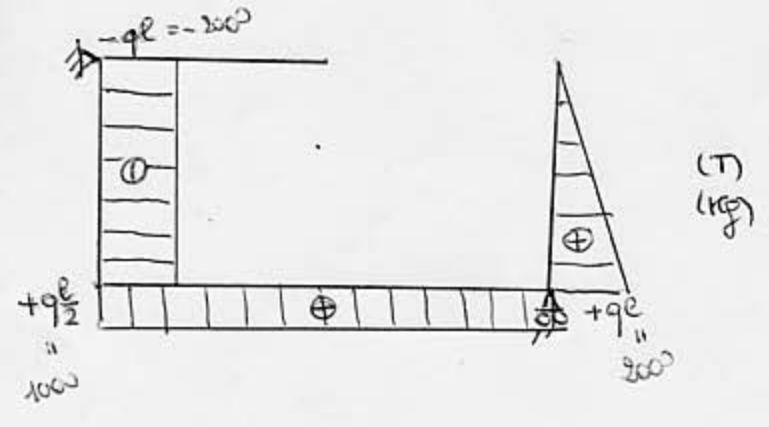
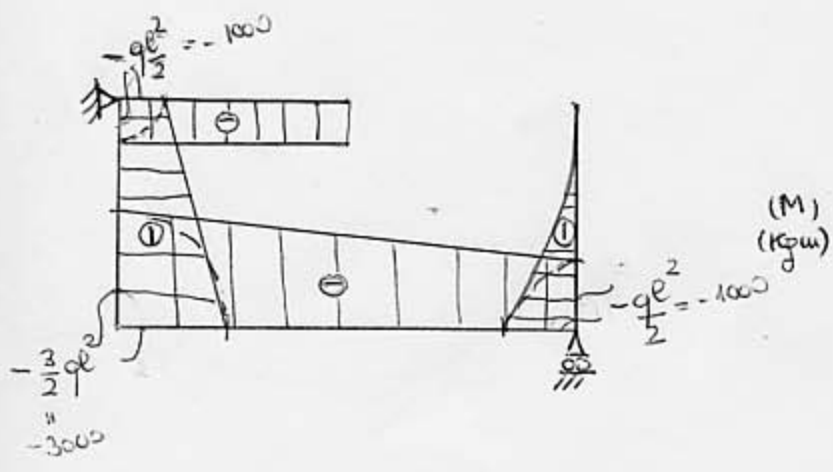
$M_C = -\frac{q^l l^2}{2} - \frac{q^l l^2}{2} = -q^l l^2$

Equilibrio in C:

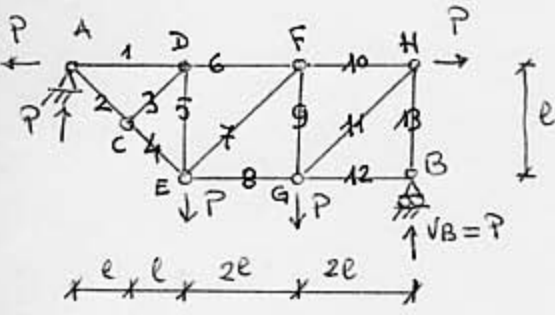


(B) $V_D 2e = +qe \frac{e}{2} + q \frac{e^2}{2} \rightarrow V_D = \frac{qe}{2}$

Diagramm:



A.3)



(A*) $V_B 6e = P4e + 2Pe \rightarrow V_B = P$
 (↑) $V_A = 2P - P = P$

Equilibrio ai nodi:

Nodi A: $\begin{cases} N_1 = P - N_2 \frac{\sqrt{2}}{2} = P - P = 0 \\ \frac{\sqrt{2}}{2} N_2 = P \rightarrow N_2 = P\sqrt{2} \end{cases}$

Nodi C: $\begin{cases} N_3 = 0 \\ N_4 = N_2 \end{cases}$

Nodi D: $\begin{cases} N_6 = 0 \\ N_5 = 0 \end{cases}$

Nodi E: $\begin{cases} N_7 \frac{\sqrt{2}}{2} = P - P\sqrt{2} \frac{\sqrt{2}}{2} = 0 \\ N_8 = P\sqrt{2} \frac{\sqrt{2}}{2} = P \end{cases}$

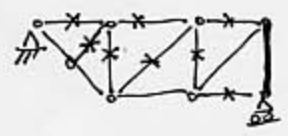
Nodi F: $\begin{cases} N_9 = 0 \\ N_{10} = 0 \end{cases}$

Nodi G: $\begin{cases} N_{11} \frac{\sqrt{2}}{2} = P \rightarrow N_{11} = P\sqrt{2} \\ N_{12} = P - N_{11} \frac{\sqrt{2}}{2} = 0 \end{cases}$

Nodi H: $\begin{cases} P\sqrt{2} \frac{\sqrt{2}}{2} = P \text{ ok} \\ N_{13} = -P\sqrt{2} \frac{\sqrt{2}}{2} = -P \end{cases}$



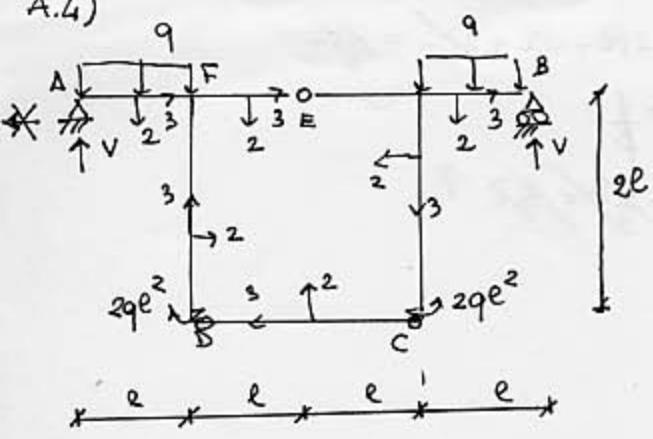
ASTA	N	kg
1	0	0
2	$P\sqrt{2}$	1414
3	0	0
4	$P\sqrt{2}$	1414
5	0	0
6	0	0
7	0	0
8	P	1000
9	0	0
10	0	0
11	$P\sqrt{2}$	1414
12	0	0
13	-P	-1000



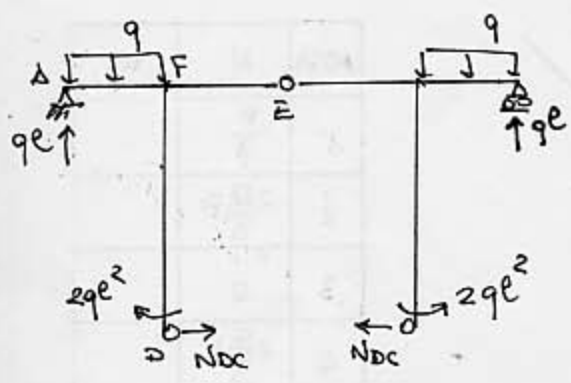
— TIRANTE ($N > 0$)
 - - - PUNTONE ($N < 0$)
 * SCARICA

A.4)

$q = 2 \text{ t/m}$
 $l = 0.5 \text{ m}$



(1) $\sum V = \sum qe$

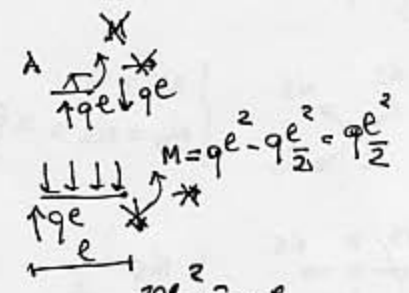


(E) ADE $N_{bc} 2l = 2qe^2 - qe \frac{3}{2}e + qe 2e$
 $= \frac{5}{2}qe^2$

$\rightarrow N_{bc} = \frac{5}{4}qe$

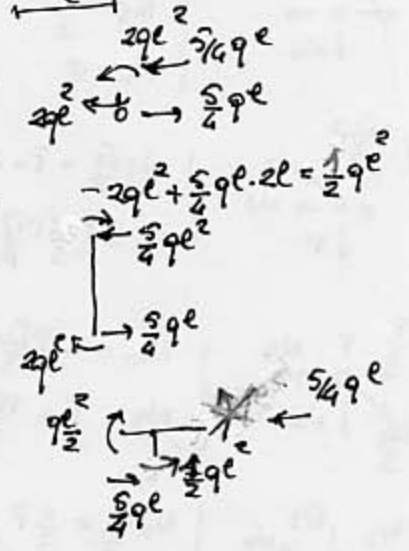
Equilibrio in A:

Equilibrio di AF:

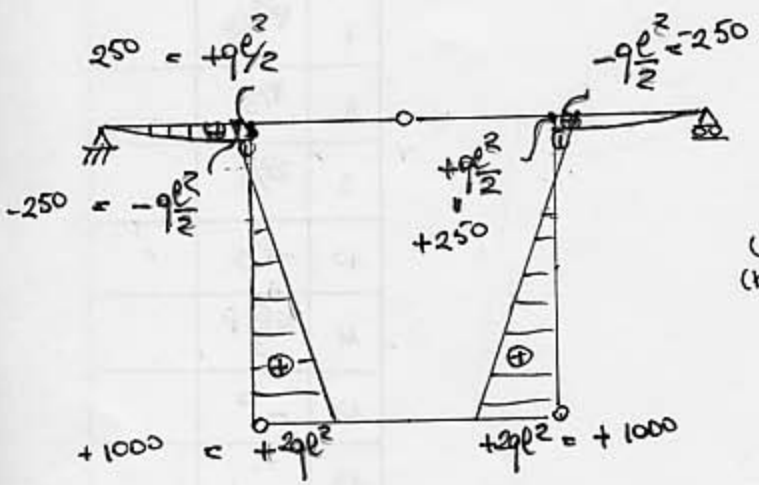


Equilibrio in D:

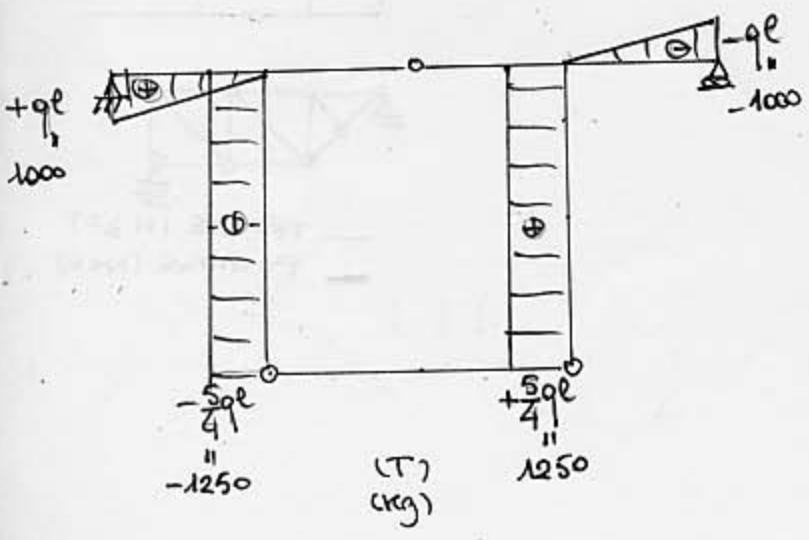
Equilibrio di DF:



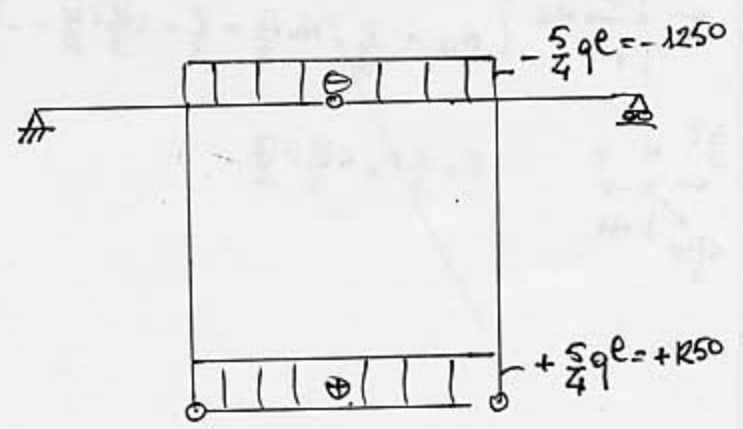
Diagrammi di M, N, T:



(M)
(kgm)



(T)
(kg)



(N)
(kg)