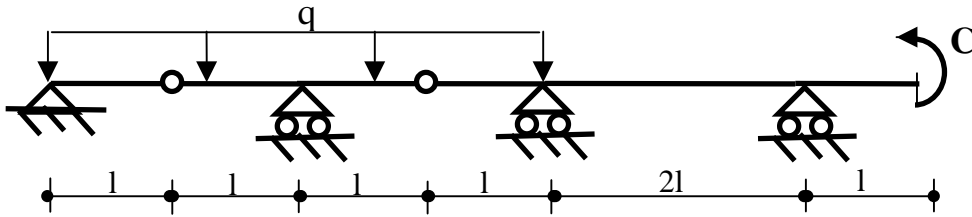
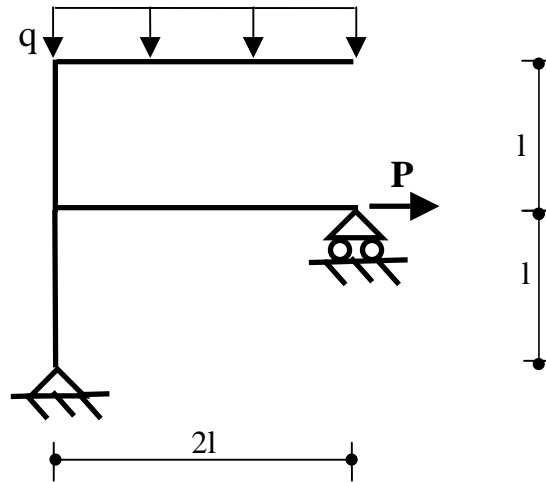


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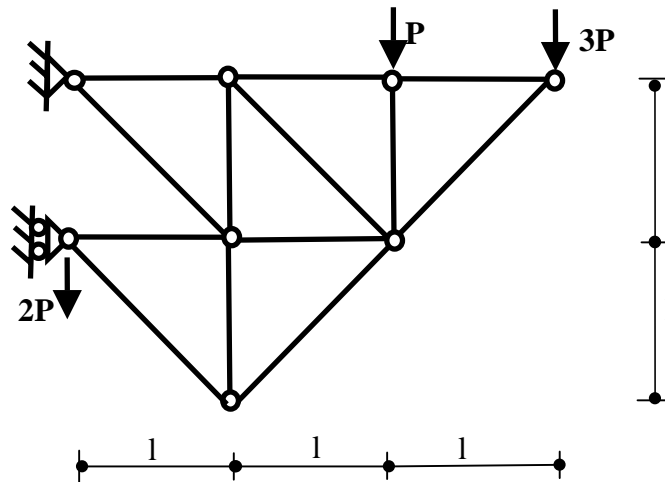
- 1) Disegnare i diagrammi quotati delle azioni interne (N, T, M) per $l=1$ m, $q=15$ kN/m, $C=10$ kNm.



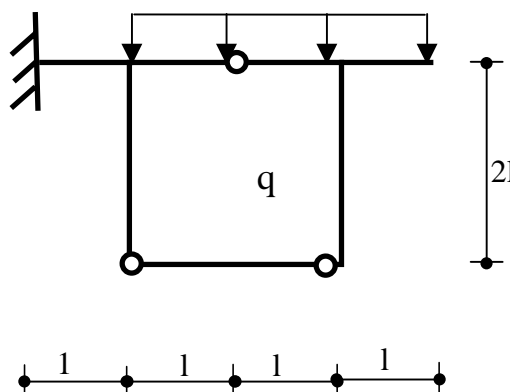
- 2) Disegnare i diagrammi quotati delle azioni interne (N, T, M) per $l=1$ m, $q=15$ kN/m, $P=15$ kN.



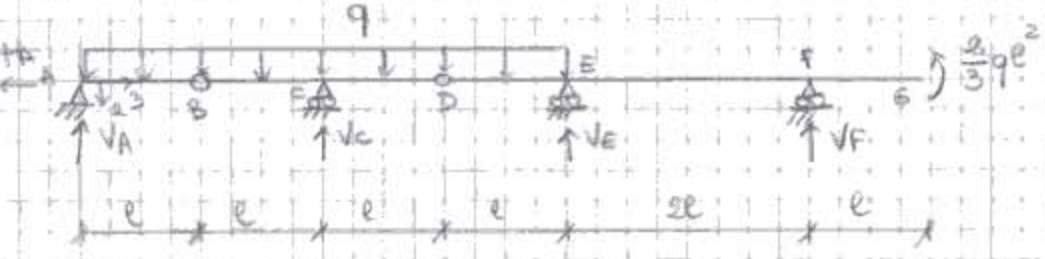
- 3) Calcolare lo stato di sollecitazione per $l=1$ m, $P=15$ kN.



- 4) Disegnare i diagrammi quotati di (N,T,M) per $l=1$ m, $q=15$ kN/m.



(B)



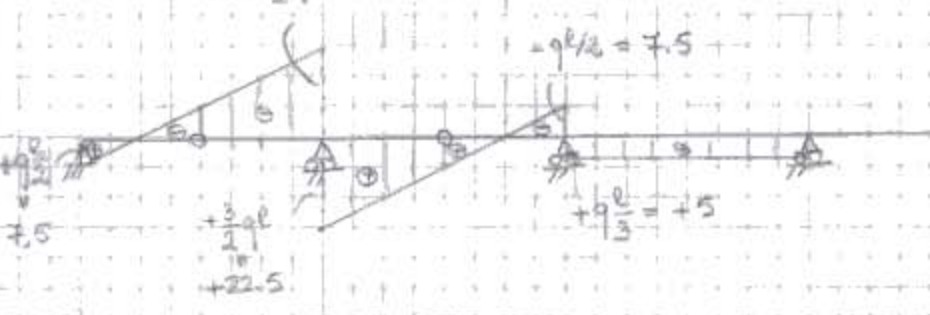
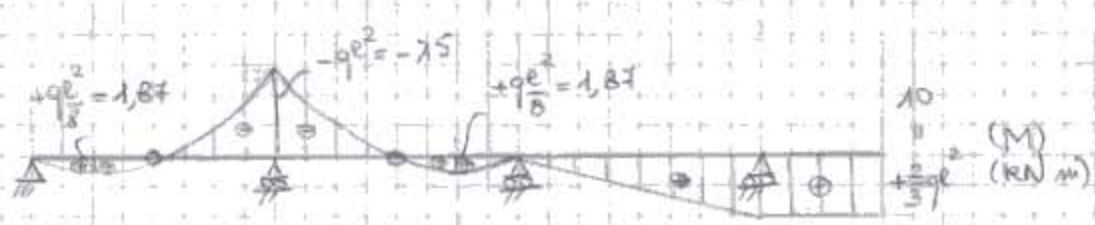
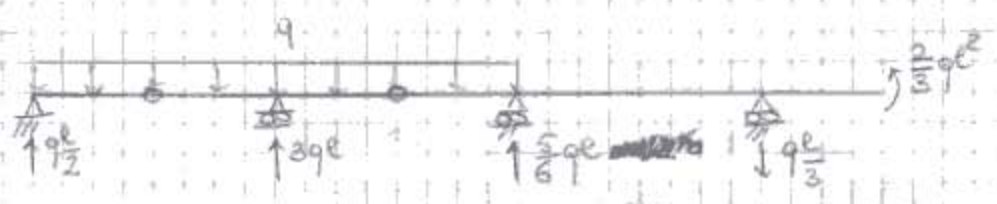
$\rightarrow H_A = 0$

(B) $V_{AB} = q \cdot \frac{e}{2} = 7.5 \text{ KN}$

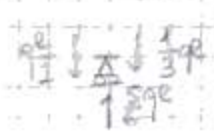
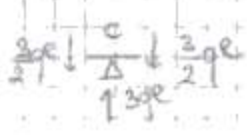
(D) $V_{CD} = 3qe \cdot \frac{3}{2} - q \cdot \frac{3}{2} \cdot \frac{3}{2} = \frac{3}{2}qe(3-1) = 3qe = 45 \text{ KN}$

(E) $V_{EF} = -\frac{1}{3}qe^2 - 4qe \cdot \frac{e}{2} + q \cdot \frac{e}{2} \cdot \frac{e}{2} + 3qe \cdot \frac{e}{2}$
 $= qe(-\frac{1}{3} - 4 + \frac{1}{2} + 3) = -\frac{9}{6}qe = -1.5 \text{ KN}$

(F) $V_E = 4qe - q \cdot \frac{e}{2} - 3qe + q \cdot \frac{e}{2} = qe(\frac{1}{2} + \frac{1}{2}) = qe = 12.5 \text{ KN}$

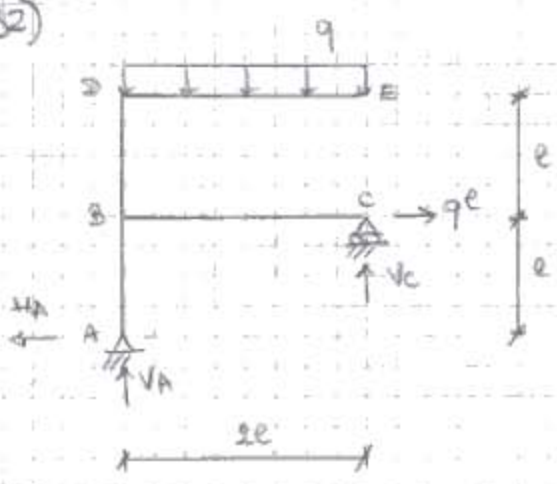


(T) (RN) (N) = 0



$M_C = q \cdot \frac{e}{2} \cdot 2e - 4qe \cdot e = -qe^2$

82)

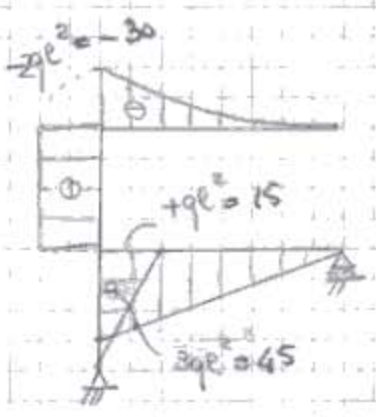
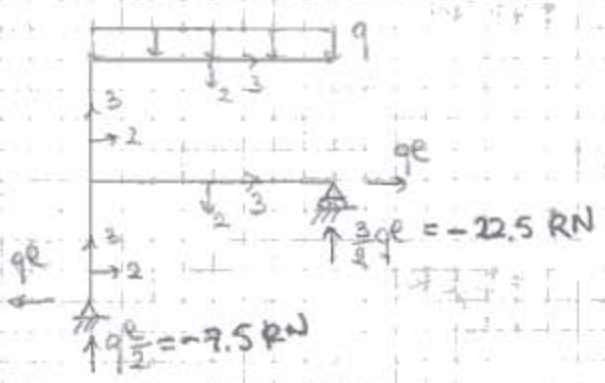


$(\leftarrow) H_A = qe$

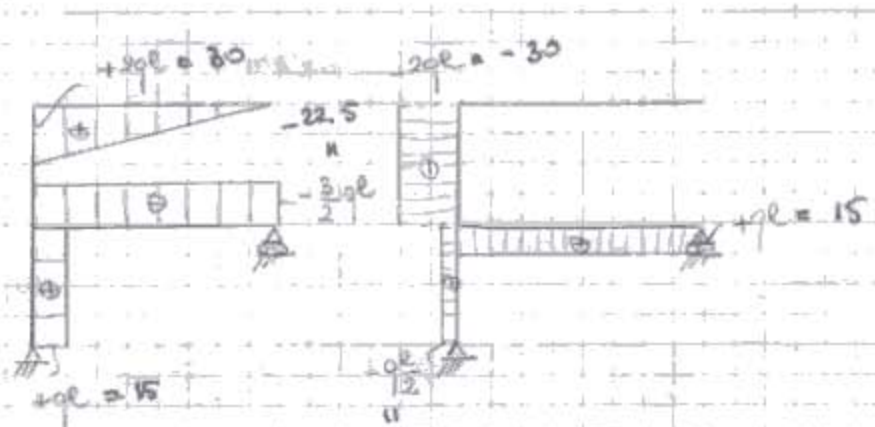
$(\uparrow) V_c 2e = qe^2 + 2qe^2$

$\hookrightarrow V_c = \frac{3}{2} qe$

$(\uparrow) V_A = 2qe - \frac{3}{2} qe = \frac{qe}{2}$

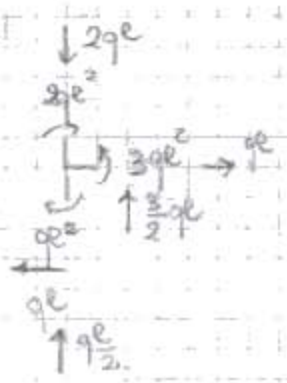


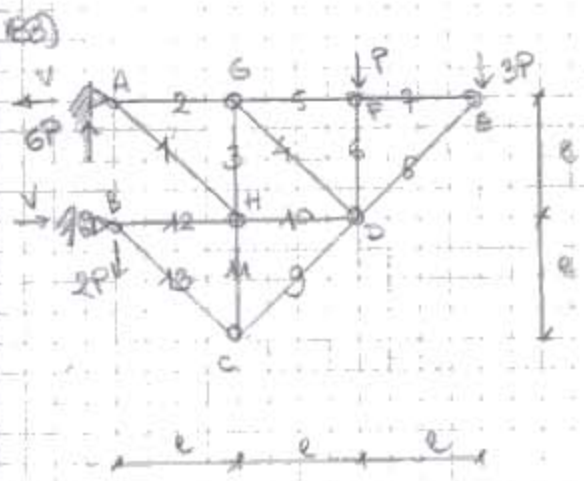
(M)
(RN.m)



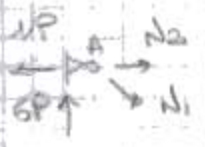
(T)
(RN)

(N)
(RN)

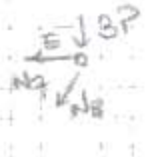




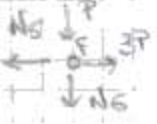
$(A) \quad N_1 = 2P\sqrt{2} + 3P\sqrt{2}$
 $V = 4P$



$N_1 \frac{\sqrt{2}}{2} = 6P \rightarrow N_1 = 6P\sqrt{2}$
 $N_2 = 4P - N_1 \frac{\sqrt{2}}{2} = (4 - 6)P = -2P$



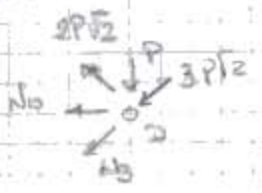
$N_3 \frac{\sqrt{2}}{2} = -2P \rightarrow N_3 = -2P\sqrt{2}$
 $N_4 = -N_3 \frac{\sqrt{2}}{2} = 2P$



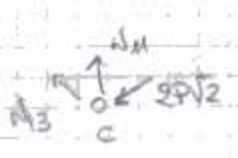
$N_5 = 2P$
 $N_6 = -P$



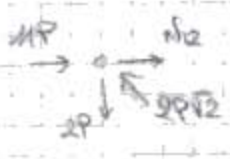
$N_7 \frac{\sqrt{2}}{2} = (5 - 3)P = 2P \rightarrow N_7 = 2P\sqrt{2}$
 $N_8 = -N_7 \frac{\sqrt{2}}{2} = -2P$



$N_9 \frac{\sqrt{2}}{2} = 2P\sqrt{2} \frac{\sqrt{2}}{2} - P - 3P\sqrt{2} \frac{\sqrt{2}}{2} = -2P \rightarrow N_9 = -2P\sqrt{2}$
 $N_{10} = -N_9 \frac{\sqrt{2}}{2} - 3P\sqrt{2} \frac{\sqrt{2}}{2} - 3P\sqrt{2} \frac{\sqrt{2}}{2} = -3P$

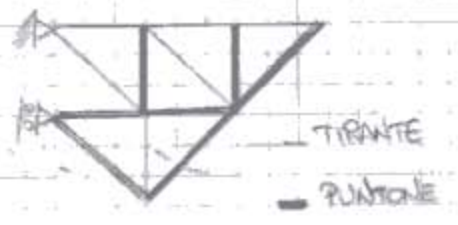


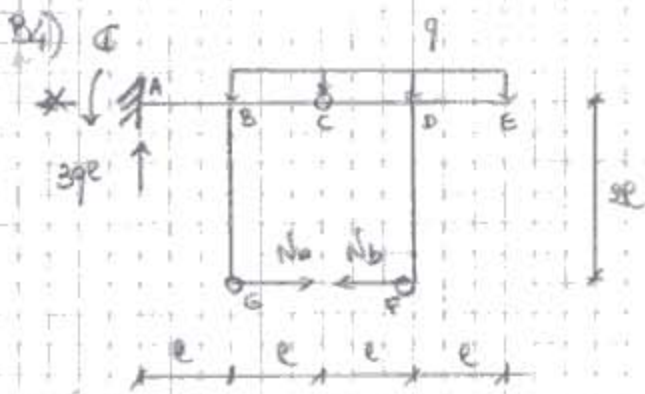
$N_{13} \frac{\sqrt{2}}{2} = -2P\sqrt{2} \frac{\sqrt{2}}{2}$
 $N_{14} = +2P\sqrt{2} \frac{\sqrt{2}}{2} \cdot 2 = 4P$



$2P\sqrt{2} \frac{\sqrt{2}}{2} - 2P = 0$
 $N_{16} = +4P + 2P\sqrt{2} \frac{\sqrt{2}}{2} = -8P$

ASTA	N	KN
1	$6P\sqrt{2}$	127
2	$5P$	75
3	$-8P$	-30
4	$2P\sqrt{2}$	42
5	$3P$	45
6	$-P$	-15
7	$3P$	45
8	$-3P\sqrt{2}$	64
9	$-2P\sqrt{2}$	-42
10	$-3P$	-45
11	$+4P$	60
12	$-9P$	-135
13	$-2P\sqrt{2}$	-42



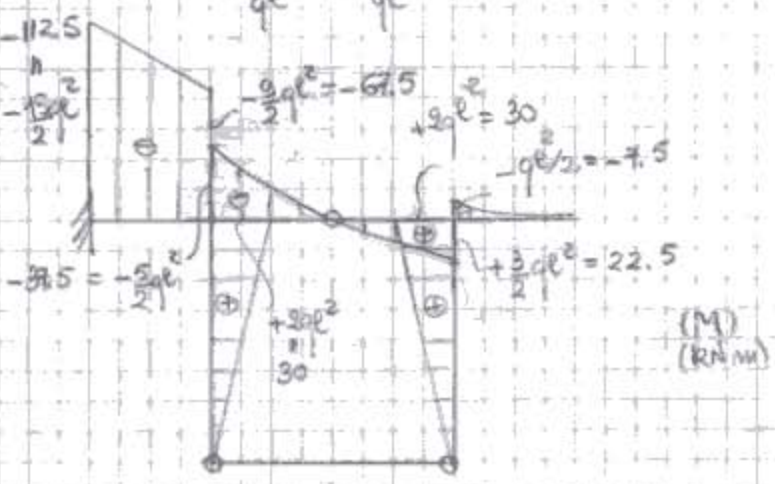
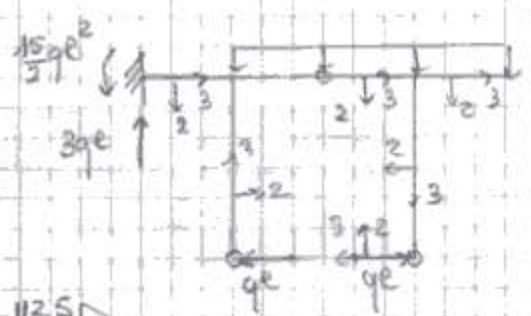


(A) $I = 3qe \cdot \frac{5e}{2} = \frac{15}{2} qe^2$

Eq. in directions:

(C) $N_b \cdot 2e = -2qe^2$

$\rightarrow N_b = -qe = -15 \text{ kN}$



$\frac{3qe^2}{2} \uparrow$ $\frac{qe^2}{2} \downarrow$ $qe^2 \rightarrow$ $2qe^2 \downarrow$

$\frac{9qe^2}{2} \uparrow$ $\frac{5qe^2}{2} \downarrow$ $2qe^2 \downarrow$

$\frac{15}{2} - \frac{3e^2}{2} = \frac{9}{2}$

