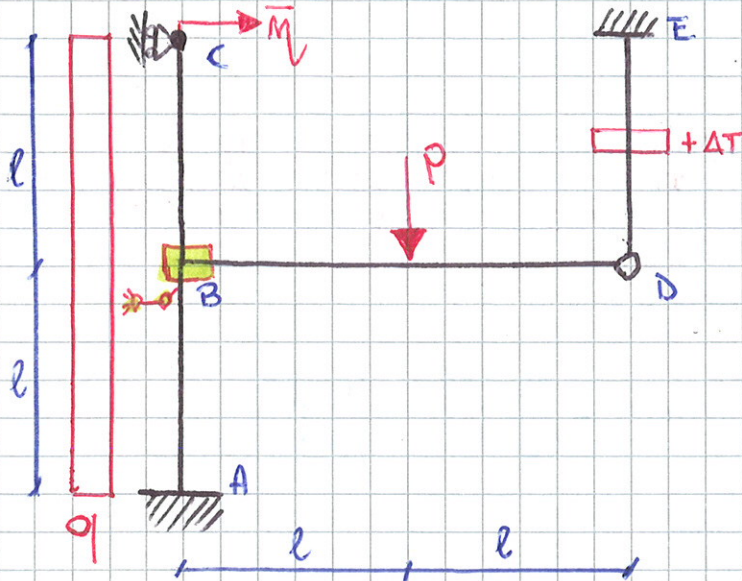
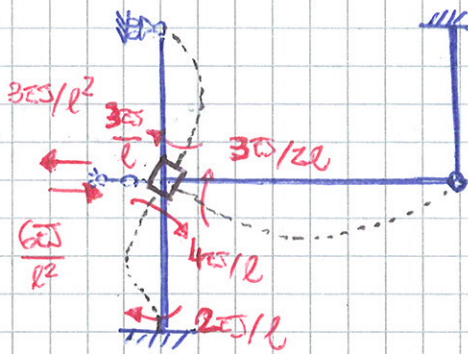


TEMA D'ESAME 03/03/13



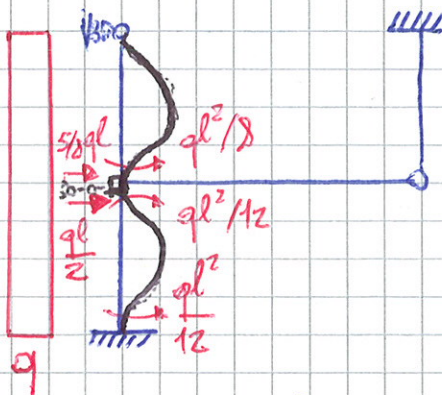
$$q_B = 1$$



$$M_{BB} = \frac{4ES}{l} + \frac{3ES}{l} + \frac{3ES}{2l} = \frac{17ES}{2l}$$

$$h_{qB} = \frac{3ES}{l^2} - \frac{6ES}{l^2} = -\frac{3ES}{l^2}$$

$$q \neq 0$$



$$M_{Bq} = \frac{1}{12}ql^2 - \frac{1}{8}ql^2 = -\frac{1}{24}ql^2$$

$$h_{qB} = -\frac{5}{12}ql - \frac{1}{2}ql = -\frac{9}{8}ql$$

$$P = 2ql$$

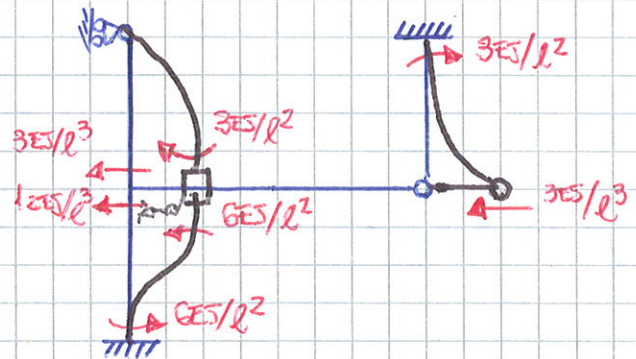
$$\Delta T = \frac{16ql^3}{9ES}$$

$$\bar{M} = \frac{13ql^4}{8ES}$$

CONTRAZIONE:

→ □ ← ; P + mill'oste

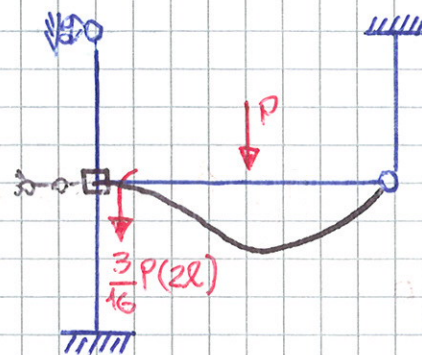
$$M = 1$$



$$M_{SM} = \frac{3ES}{l^2} - \frac{6ES}{l^2} = -\frac{3ES}{l^2}$$

$$h_{qM} = \frac{3ES}{l^3} + \frac{3ES}{l^3} + \frac{12ES}{l^3} = \frac{18ES}{l^3}$$

$$P \neq 0$$

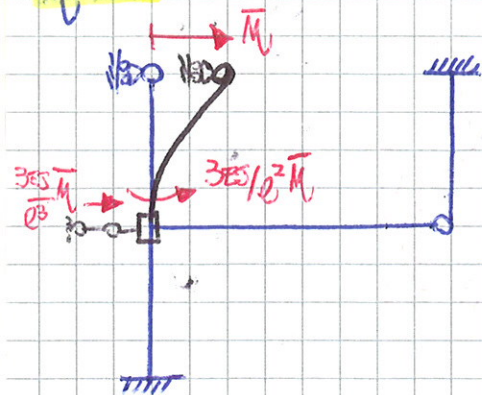


$$M_{BP} = \frac{3}{8}Pl = -\frac{3}{4}ql^2$$

$$h_{PD} = 0$$

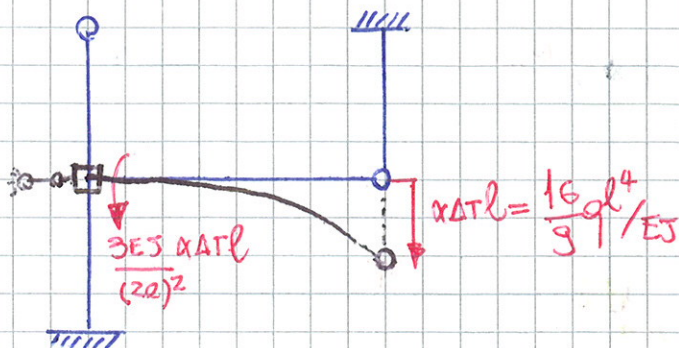
$$M_1 \neq 0$$

$$\Delta T \neq 0$$



$$M_{B1} = -\frac{39}{8} q l^2$$

$$h_{M1} = -\frac{39}{8} q l$$



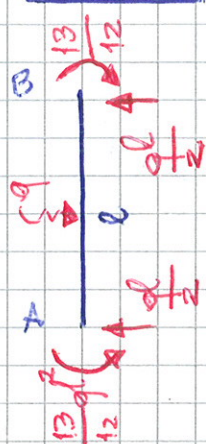
$$M_{B1} = -\frac{16}{12} q l^2 = -\frac{4}{3} q l^2$$

$$h_{M1} = 0$$

SISTEMA RISOLVENTE:

$$\begin{cases} \frac{17ES}{2l} \varphi_B - \frac{3ES}{l^2} M - \frac{1}{24} q l^2 - \frac{3}{4} q l^2 - \frac{39}{8} q l^2 - \frac{4}{3} q l^2 = 0 \\ -\frac{3ES}{l^2} \varphi_B + \frac{18ES}{l^2} M - \frac{9}{8} q l - \frac{39}{8} q l = 0 \end{cases} \quad [\varphi_B = 1; M = \frac{1}{2}]$$

ASTA AB



$$M_A = \left(2 + \left(3 + \left(\frac{1}{2} \right) \right) \right) = \frac{13}{12}$$

$$M_B = \left(4 + \left(3 + \left(\frac{1}{2} \right) \right) \right) = \frac{13}{12}$$

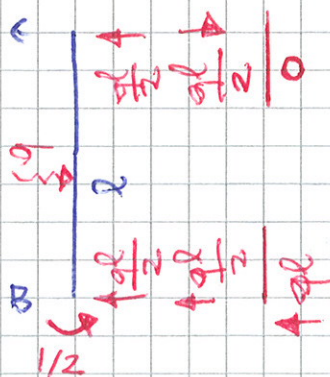
$$M_A - M_B = 0$$

$$V(x) = 0 \quad \frac{q l}{2} - q x = 0 \rightarrow x = \frac{1}{2} l$$

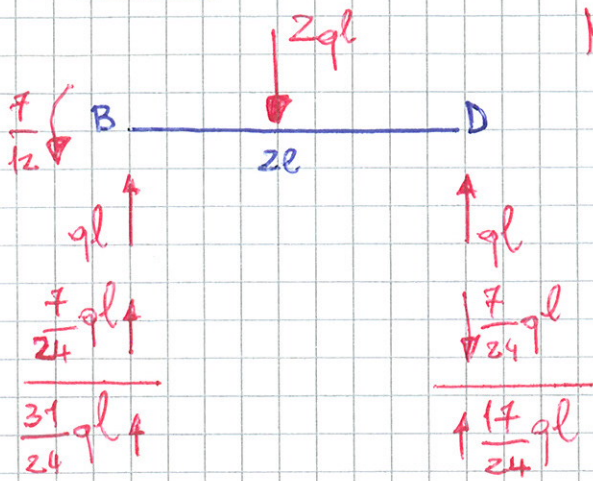
$$M\left(\frac{1}{2}l\right) = \frac{q l}{2} \cdot \left(\frac{1}{2}l\right) - \frac{13}{12} q l^2 - \frac{1}{2} q \left(\frac{1}{2}l\right)^2 = \frac{q l^2}{4} - \frac{13}{12} q l^2 - \frac{1}{8} q l^2 = -\frac{23}{24} q l^2$$

ASTA BC

$$M_B = \left(3 + \left(3 + \left(\frac{1}{2} \right) \right) \right) = \frac{39}{8}$$



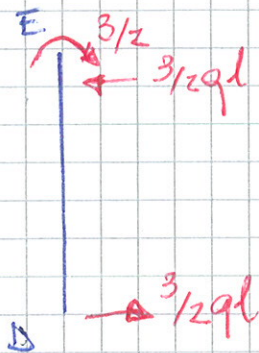
ASTA BD



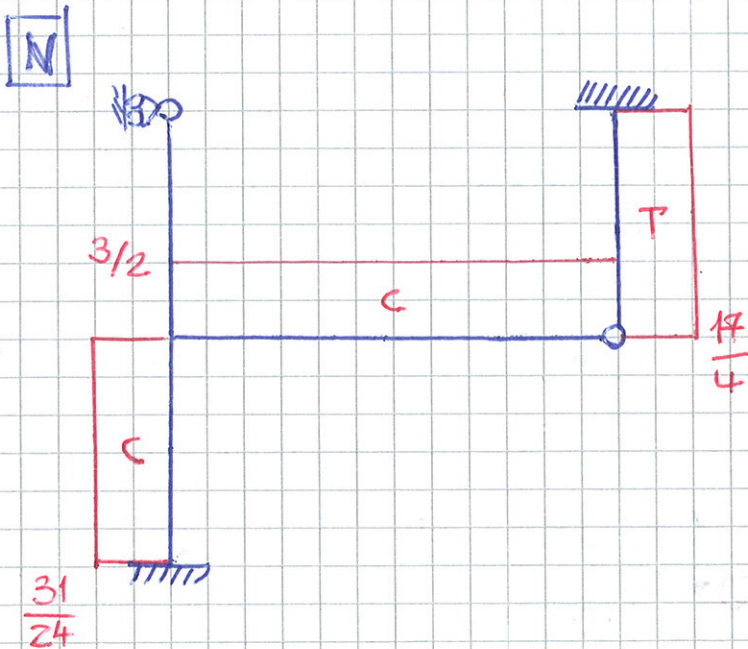
$$M_B = \left(\frac{3}{2} \right) + \left(\frac{3}{4} \right) + \left(\frac{4}{3} \right) =$$

$$M(x) = 0 \rightarrow \frac{7}{12}ql^2 - \frac{31}{24}qlx = 0 \quad x = \frac{14}{31}$$

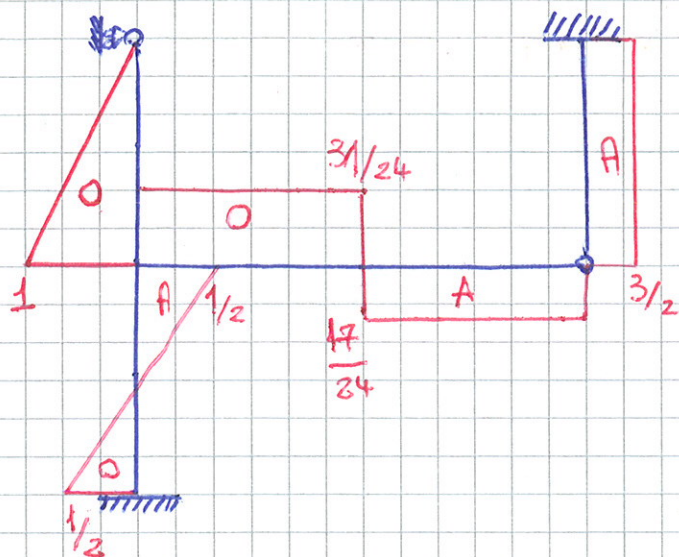
ASTA DE



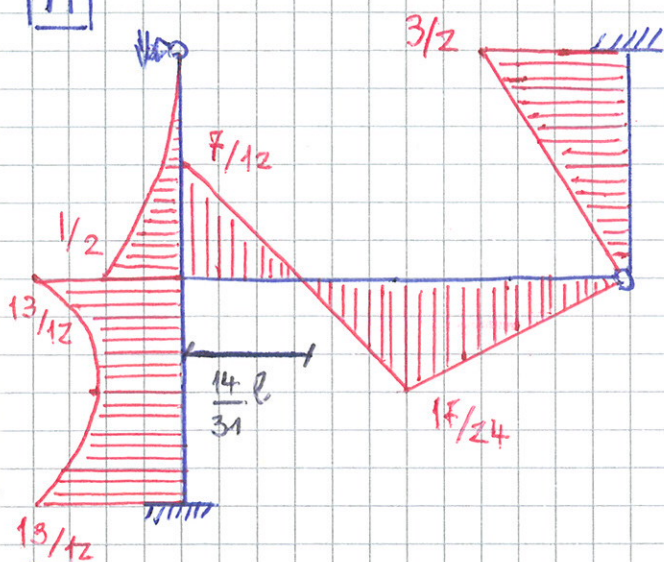
DIAGRAMMI AZIONI INTERNE



V



M



Deformate

