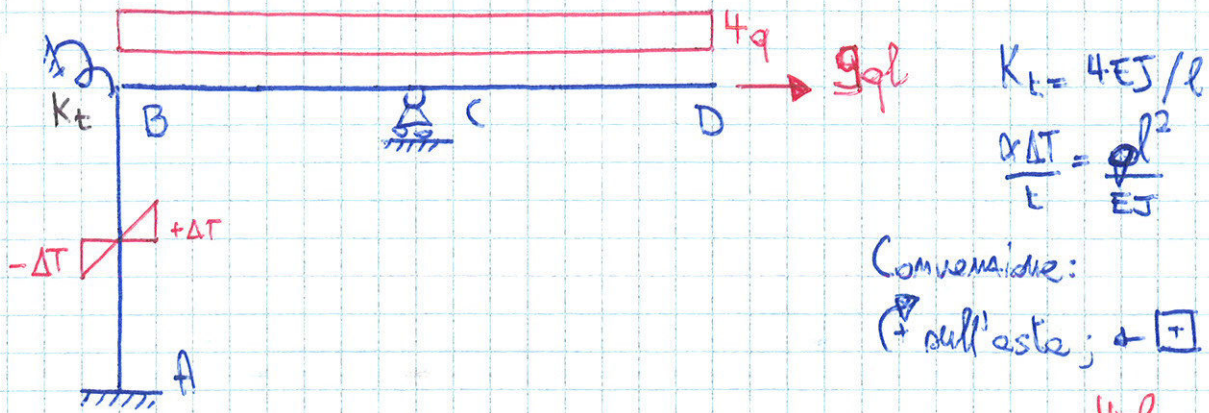
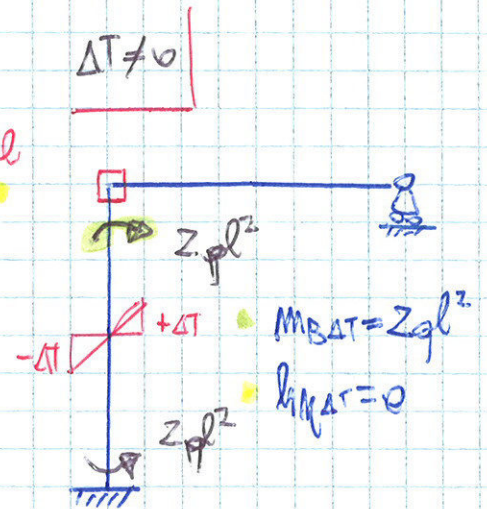
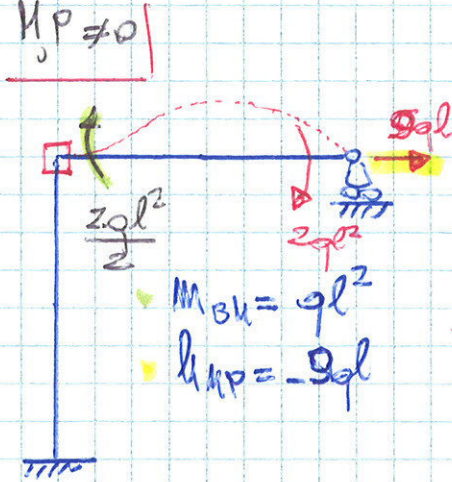
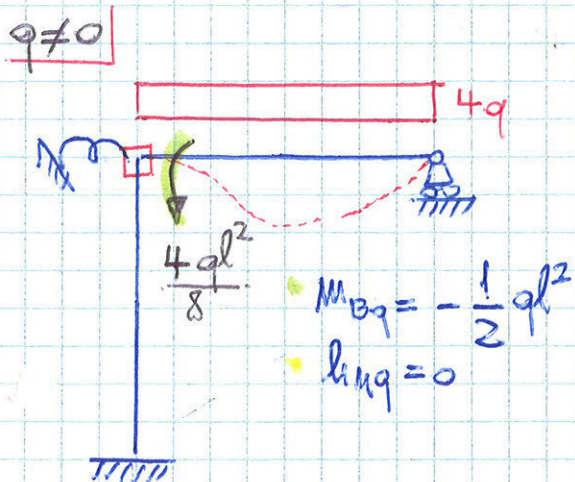
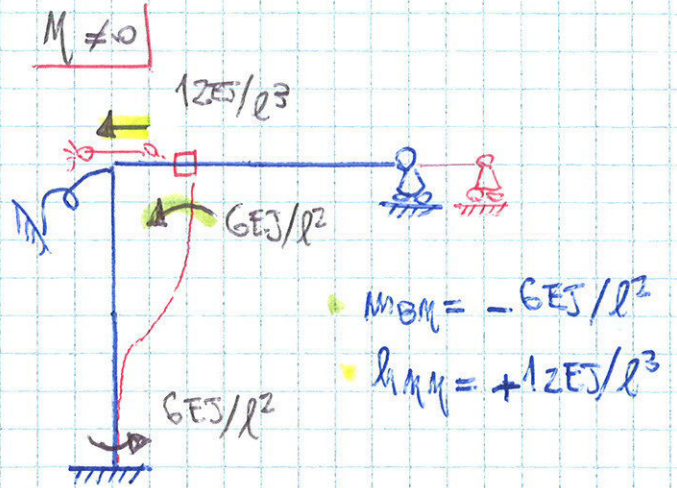
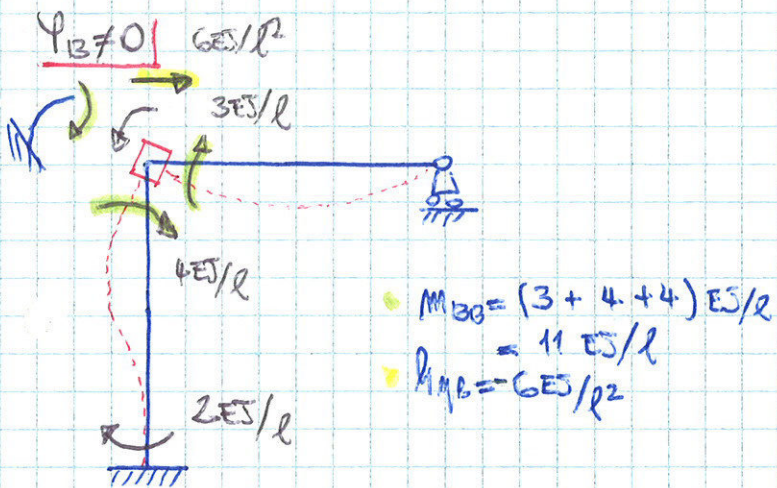
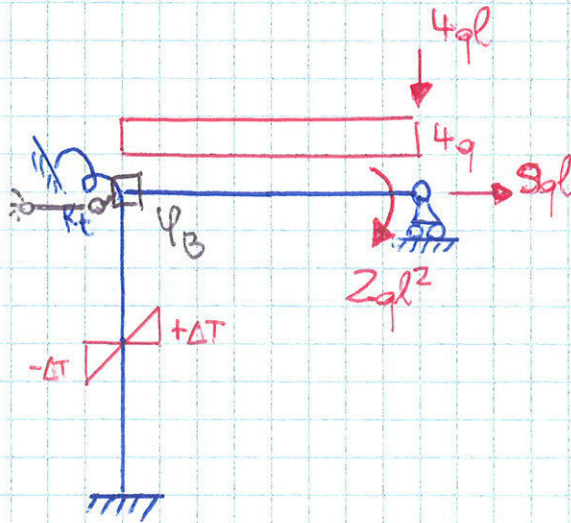
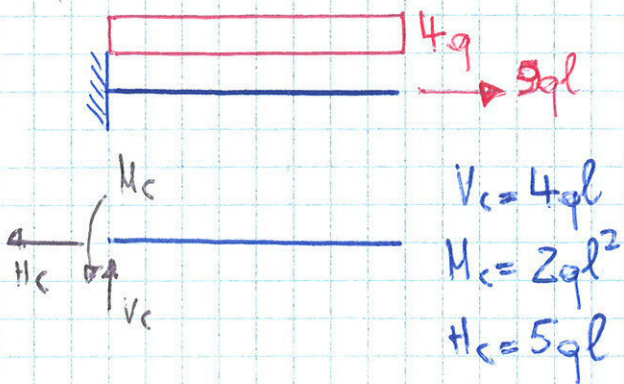




⬆️ sull'este; ⬆️  $\boxed{+}$  sul master

## Appendice CD





# SISTEMA RISOLVENTE

$$\begin{cases} \frac{11ES}{l} \varphi_B - \frac{6ES}{l^2} M + \frac{5}{2} ql^2 = 0 \\ -\frac{6ES}{l^2} \varphi_B + \frac{12ES}{l^3} M - 9ql = 0 \end{cases}$$

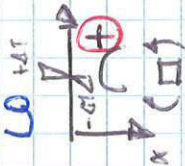
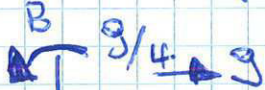
$$\varphi_B = \frac{1}{4} \frac{ql^3}{ES}$$

$$M = \frac{7}{8} \frac{ql^4}{ES}$$

ASTA AB

$$M_A: \left( \frac{1}{2} + \left( \frac{21}{4} + \left( \frac{27}{4} \right) \right) \right) = \left( \frac{27}{4} \right)$$

$$M_B: \left( 1 + \left( \frac{21}{4} + \left( \frac{27}{4} \right) \right) \right) = \left( \frac{3}{4} \right)$$



$$y'' = -\frac{M}{ES} + \frac{\alpha \Delta T}{l}$$

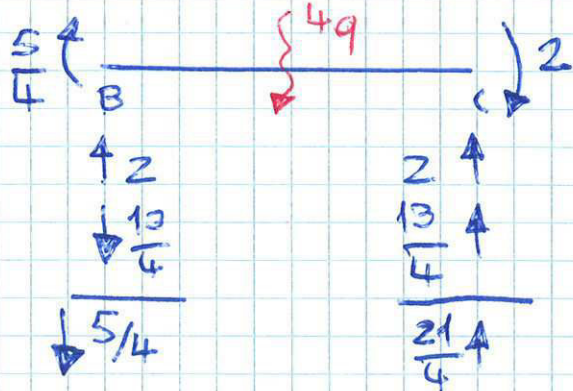
$$= -\left( -\frac{27}{4} ql^2 + 9qlx \right) \frac{1}{ES} - \frac{2ql^2}{ES}$$

$$y'' = 0: \frac{27}{4} l - 9x - 2l = 0$$

$$x \leq \frac{19}{4 \cdot 9} l = \frac{19}{36} l$$

ASTA BC

$$M_B: \left( \frac{3}{4} + \left( \frac{1}{2} + \left( 1 \right) \right) \right) = \left( \frac{5}{4} \right)$$



$$M(x) = 0$$

$$-\frac{5}{4} ql^2 + \frac{5}{4} qlx + 4q \frac{x^2}{2} = 0$$

$$8x^2 + 5lx - 5 = 0$$

$$x_{1/2} = \frac{-5 \pm \sqrt{25 + 160}}{16} = \frac{-5 + \sqrt{185}}{16}$$

$$= 0,54l$$

