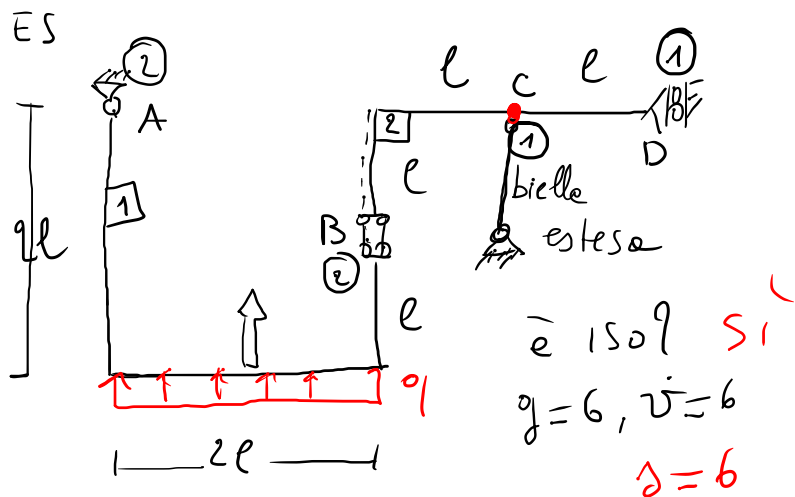
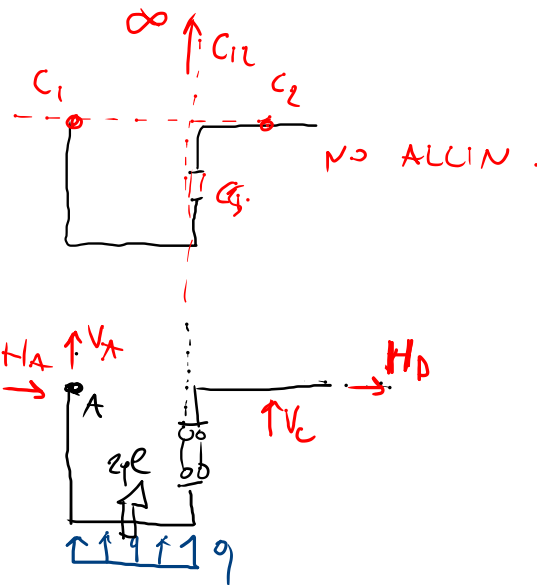
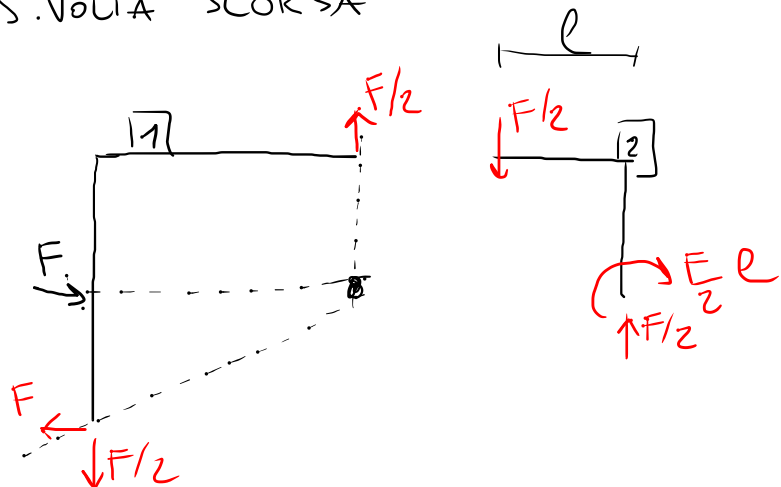


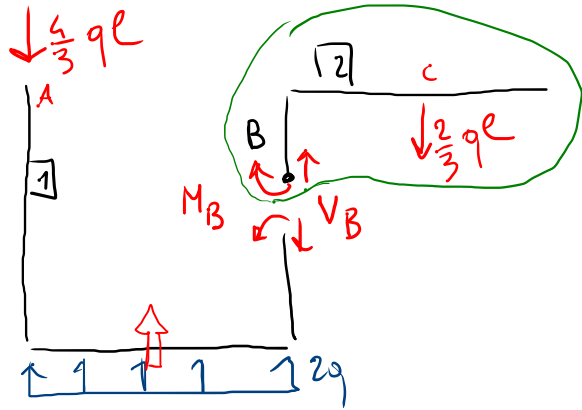
ES. VOLTA SCORSA

28/4/22



$$\begin{aligned}
 \rightarrow: H_A + H_D &= 0 & H_A &= 0 \\
 \uparrow: V_A + 2ql + V_C &= 0 & V_A &= \frac{2}{3}ql - 2ql = -\frac{4}{3}ql \\
 \curvearrowright: 2ql \cdot l + V_C \cdot 3l &= 0 & V_C &= -\frac{2}{3}ql \\
 \rightarrow: H_D &= 0 & H_D &= 0
 \end{aligned}$$

ASSE DEL D. PENNACOLO

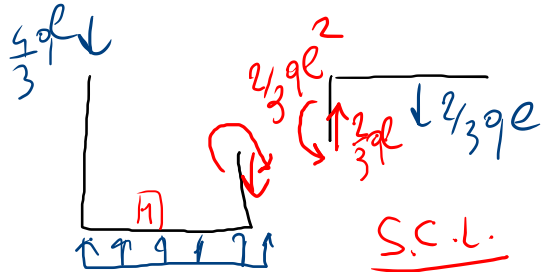


Calcolo V_B, M_B con l' EQUILIBRIO DI
 UNO DEI 2 CORPI; AD ESEMPIO $\boxed{2}$

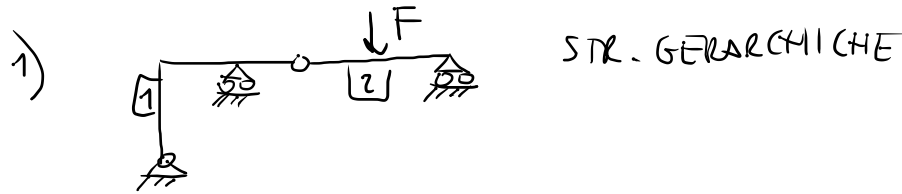
$$\left. \begin{array}{l} +\uparrow \boxed{2} : +V_B - \frac{2}{3}ql = 0 \\ \curvearrowright \boxed{2} : -M_B - \frac{2}{3}ql \cdot l = 0 \end{array} \right\} \begin{array}{l} V_B = \frac{2}{3}ql \\ M_B = -\frac{2}{3}ql^2 \end{array}$$

NOTA: TRA EQ. AUSILIARIE E EQ. PARZIALI HO USATO TUTTE LE EQ. DI EQUILIBRIO
 DEL CORPO $\boxed{2}$.

- IL CORPO $\boxed{1}$ È AUTOMATICAMENTE IN EQUILIBRIO VISTO CHE LO
 SONO $\boxed{1} + \boxed{2}$ e $\boxed{2}$. INFATTI HO USATO TUTTE LE EQ. INDIPENDENTI.

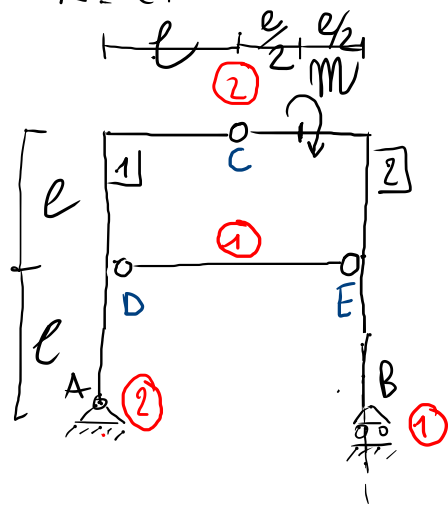


RIPASSO : STR. ARTICOLATE



2) "ARCO" A 3 CERNIERE GENERALIZZATO \Rightarrow EQ. AUSILIARIA (EQ. DI EQUILIBRIO PARZIOLE)
 $(2) + (2) + (2)$

3) STR. CHIUSE



$$q = 6$$

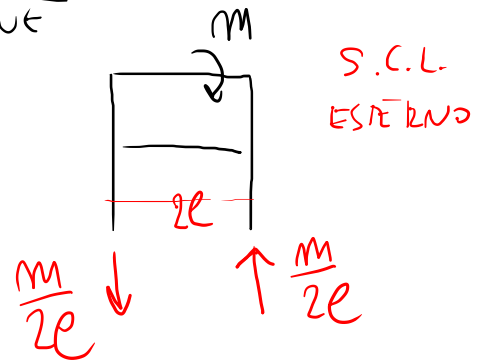
$$\boxed{v = 6}$$

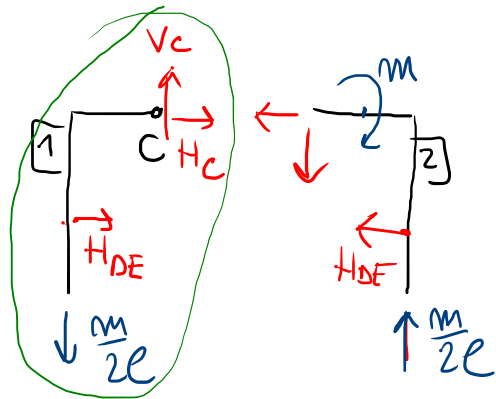
$$j = 6$$

L'EQUILIBRIO ESATURO
 E' STAT. DETERMINATO

1) CALCOLO REAZ. ESTERNE

{ EQUIL. [1] + [2]
 3 EQ. NELLE INCOGNITE
 V_A, H_A, V_B





2) CALCULO REACCIONES INTERNAS

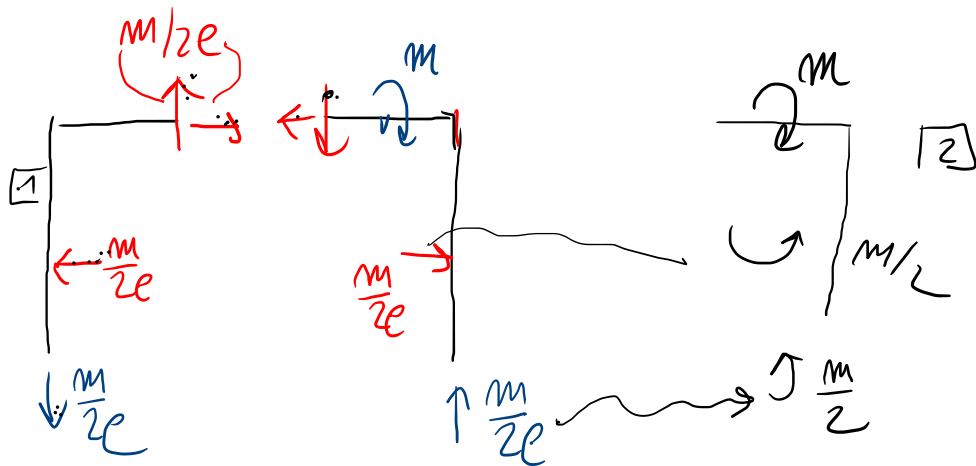
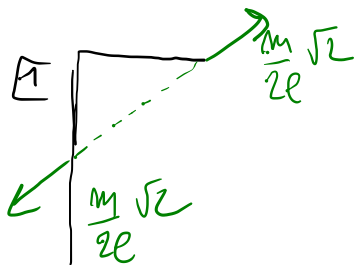
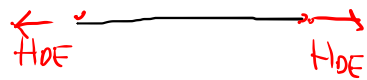
H_c, V_c, H_{DE} (3)

$$\left. \begin{aligned} \rightarrow : H_{DE} + H_c &= 0 \\ \uparrow : -\frac{m}{2e} + V_c &= 0 \\ \curvearrowright : \frac{m}{2e} \cdot e + H_{DE} \cdot e &= 0 \end{aligned} \right\}$$

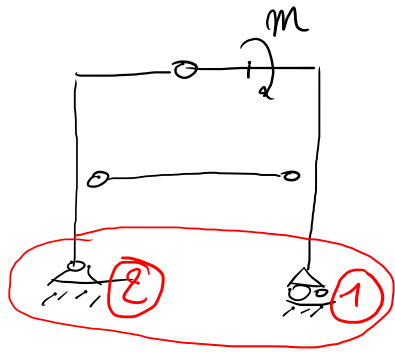
$$H_c = -H_{DE} = +\frac{m}{2e}$$

$$V_c = \frac{m}{2e}$$

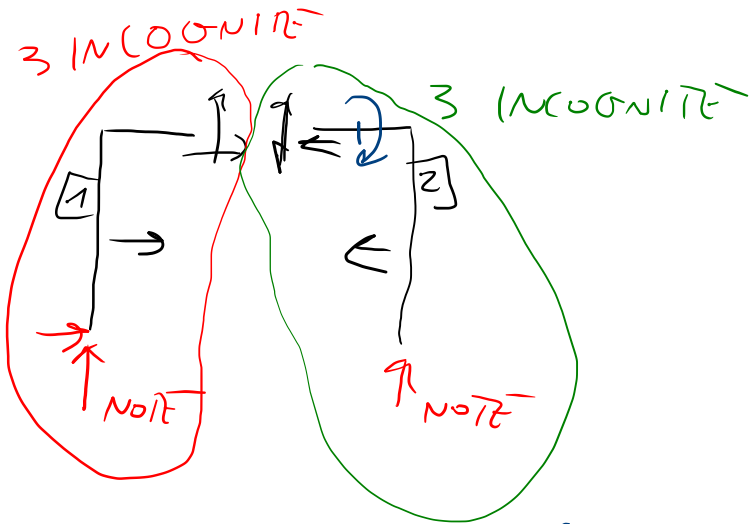
$$H_{DE} = -\frac{m}{2e}$$



SULL'ULTIMO ESERCIZIO.



EQUIL ESTERNO

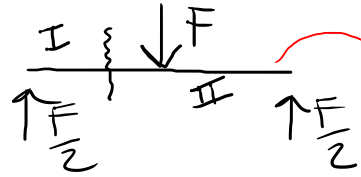


EQUIL-INTERNO (1 PER 2 CORPI)

⇒ VERIFICA FINALE DEGLI S.C.L. !!!

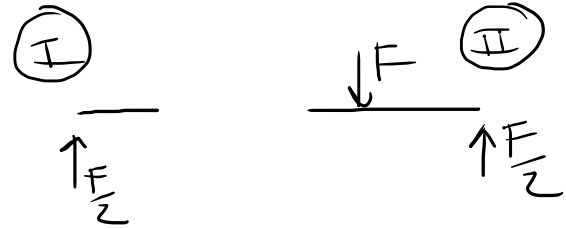
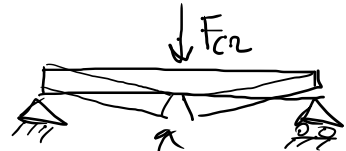
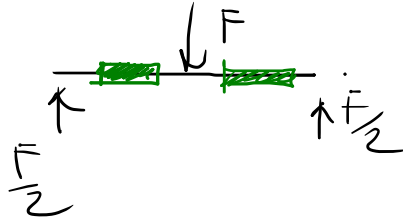
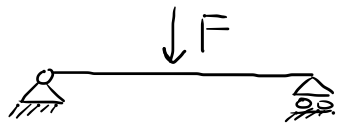
CARATTERISTICHE DELLA SOLLECITAZIONE (AZIONI INTERNE)

"INTERNA"



LA STRUTTURA È IN EQUILIBRIO, MA ANCHE OGNI SUA PARTE È IN EQUILIBRIO

"INTERNA"



NESSUNO DEI 2 S.C.L. È IN EQUILIBRIO.

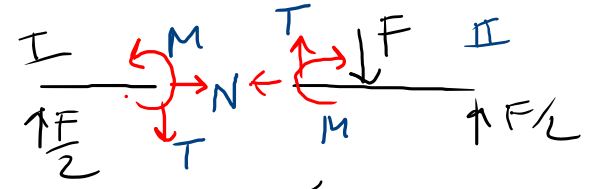
crisi delle strutture

N: SFORZO (o FORZA) ASSIALE NORMALE

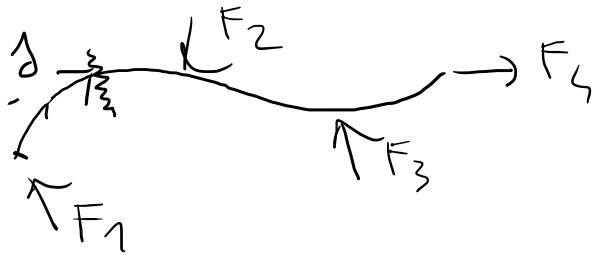
T: TAGLIO

M: MOMENTO FLETTENTE

CDS
GARANTISCONO
L'EQUILIBRIO DI
I e II

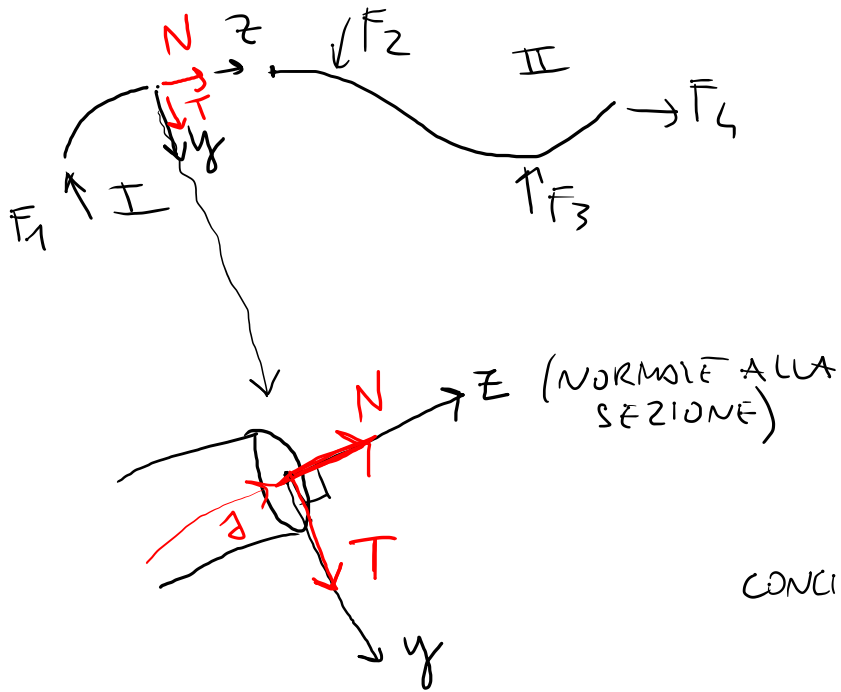


REAL. INTERNE NELLA SEZIONE DI STUDIO ("INCASTRO INTERNO")



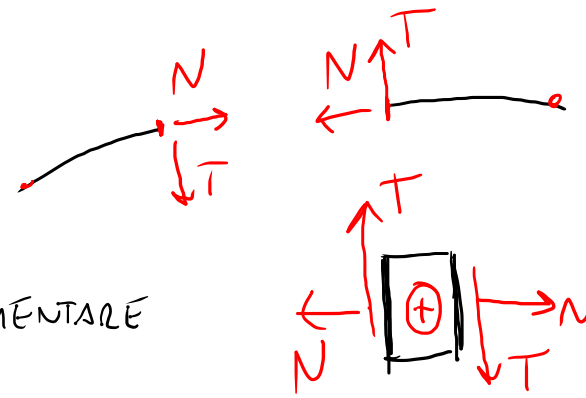
S.C.L. EQUILIBRATO

$N > 0$: TRAZIONE (FORZA USCENTE)
 $N < 0$: COMPRESSIONE (" ENTRANTE)

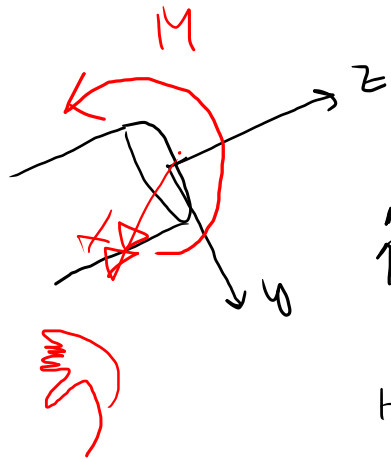
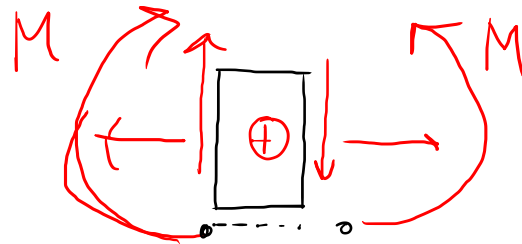
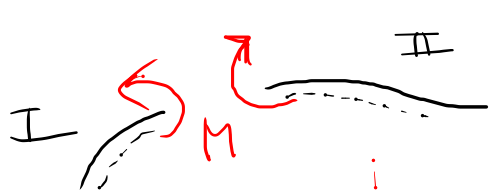


$T > 0$: FA RUOTARE IL TRATTO IN VERSO OROLOGIO

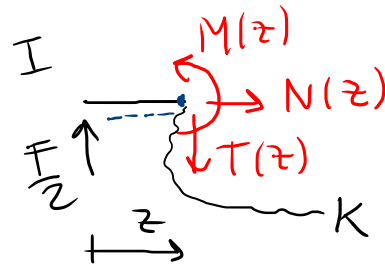
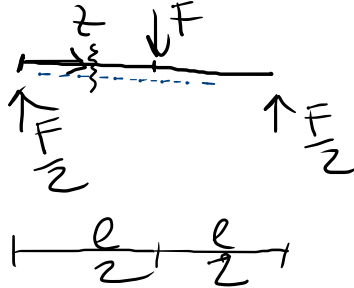
$T < 0$: FA RUOTARE IL TRATTO IN VERSO ANTI-OROLOGIO



CONCIO ELEMENTARE

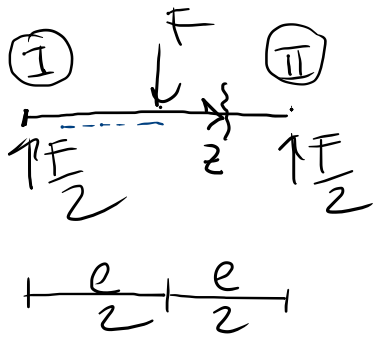


ES. CALCOLO F LE CDS DELLA TRAVE APPOGGIATA
 $(N(s), T(s), M(s))$

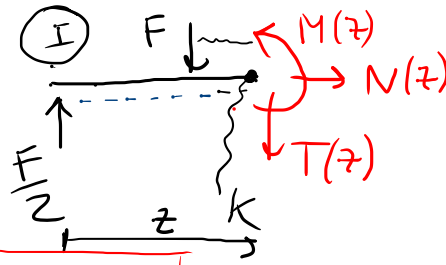


$$0 \leq z < \frac{l}{2}$$

$$\left. \begin{aligned} \rightarrow : +N(z) &= 0 & \Rightarrow N(z) &= 0 \\ +\uparrow : +\frac{F}{2} - T(z) &= 0 & \Rightarrow T(z) &= +\frac{F}{2} \\ +\curvearrowright : -\frac{F}{2}z + M(z) &= 0 & \Rightarrow M(z) &= -\frac{F}{2}z \end{aligned} \right\}$$



$$\frac{l}{2} \leq z \leq l$$



$$\uparrow: N(z) = 0$$

$$\uparrow: +\frac{F}{2} - F - T(z) = 0 \quad ; \quad T(z) = -\frac{F}{2}$$

$$\curvearrowleft: -\frac{F}{2}z + F\left(z - \frac{l}{2}\right) + M(z) = 0 \Rightarrow$$

$$\Rightarrow M(z) = \frac{F}{2}z - Fz + F\frac{l}{2} = F\frac{l}{2} - \frac{F}{2}z = \frac{F}{2}(l-z)$$

DIAGRAMMI

