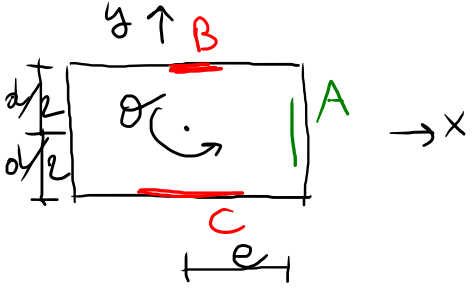


K_{ij} K_{i1} 1: x; 2: y, 3: ϑ

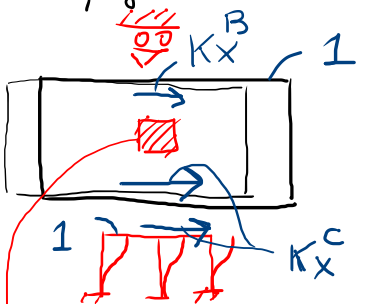
24/11/21

$x=1,\ y=\vartheta=0$

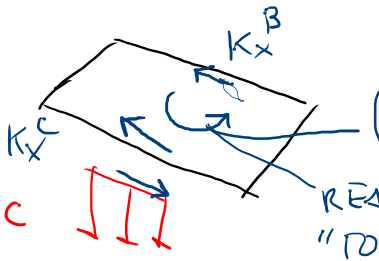
$K_{11} = K_x^C + K_x^B$

$K_{21} = 0$

$K_{31} = (K_x^C - K_x^B)\frac{d}{2}$



VINCOLO CHE BLOCCA LA ROTAZ.

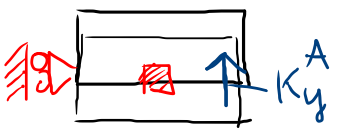


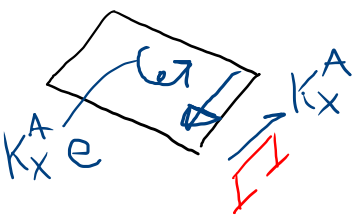
$x=\vartheta=0,\ y=1$

$K_{22} = K_y^A$

$K_{12} = 0$

$K_{32} = +K_y^A e$





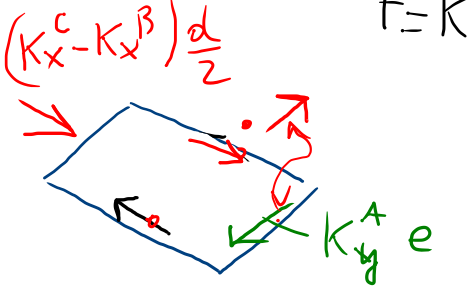
$x=y=0$; $\vartheta=1$ ↻

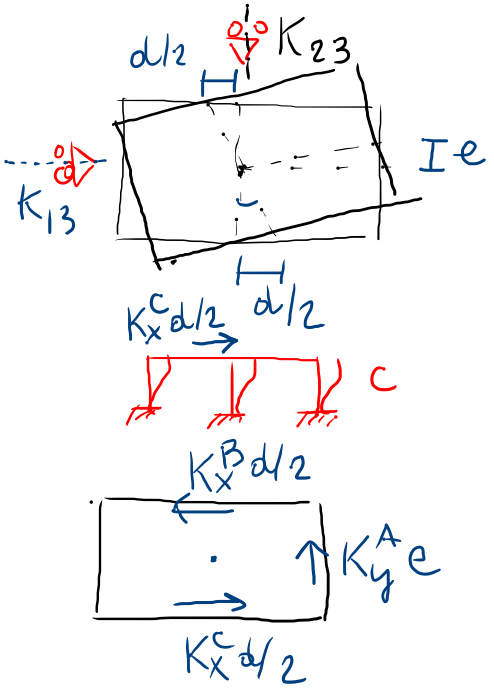
$$K_{33} = \left(K_x^C + K_x^B\right)\frac{d}{2}\cdot\frac{d}{2} + K_y^A e\cdot e$$

$$K_{13} = +\left(K_x^C - K_x^B\right)\frac{d}{2}$$

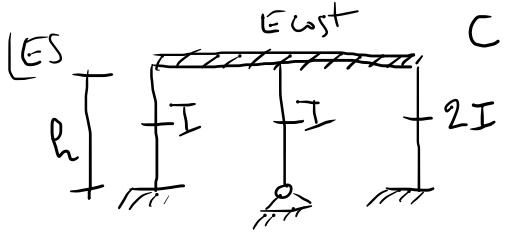
$$K_{23} = +K_y^A e$$

$F = Kx$





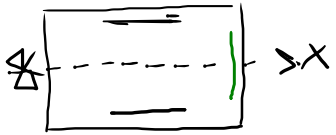
$$\underset{\sim}{K} = \begin{bmatrix} K_x^C + K_x^B & 0 & \left(K_x^C - K_x^B\right)\frac{d}{2} \\ 0 & K_y^A & K_y^A e \\ \left(K_x^C - K_x^B\right)\frac{d}{2} & K_y^A e & \left(K_x^C + K_x^B\right)\frac{d^2}{4} + K_y^A e^2 \end{bmatrix}$$



$$K_x^C = 12\frac{EI}{h^3} + 3\frac{EI}{h^3} + 12\frac{E\,2I}{h^3} = 39\frac{EI}{h^3}$$

CASO PARTICOLARE $K_x^B = K_x^C = K_x$

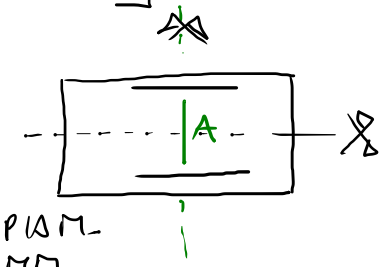
$$\underset{\sim}{K} = \begin{bmatrix} 2K_x & 0 & 0 \\ 0 & & \\ 0 & & \end{bmatrix}$$



FORZA LUNGO X : NO ROTAZIONE

ϑ

OSSERVAZ.



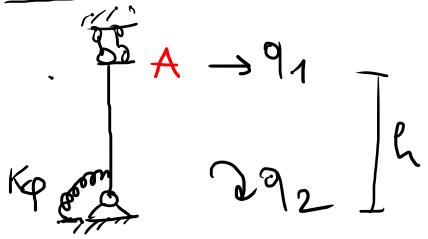
DOPPIAM. SIMM.

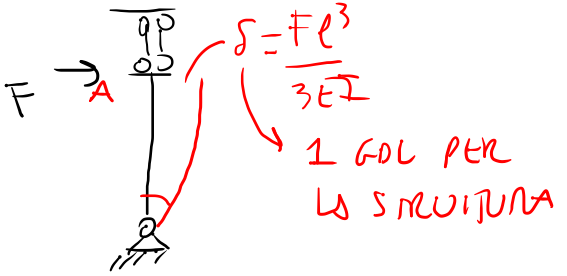
SPOST. RIGID A SULL'ASSE DI SIMMETRIA y

$$\begin{bmatrix} \cdot & 0 & 0 \\ 0 & \cdot & 0 \\ 0 & 0 & \cdot \end{bmatrix}$$

MATRICE DIAGONALE COMPLETO DISACCOPPIAM.

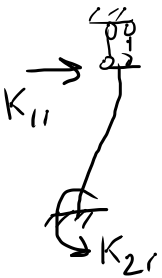
OSSERVAZ. SUI VINCOLI CEDEVOLI



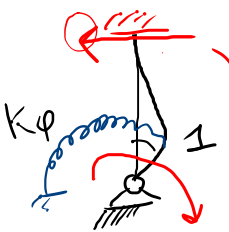


$$\underset{\sim}{K} = \begin{bmatrix} 12\frac{EI}{h^3} & -6\frac{EI}{h^2} \\ -6\frac{EI}{h^2} & \end{bmatrix}$$

$q_1 = 1,\ q_2 = 0$



$q_2 = 1\ ;\ q_1 = 0$



$$K_{22} = \frac{4EI}{h} 1 + K_\varphi 1$$

$$\frac{3}{2}\frac{4EI}{h^2} = 6\frac{EI}{h^2}$$