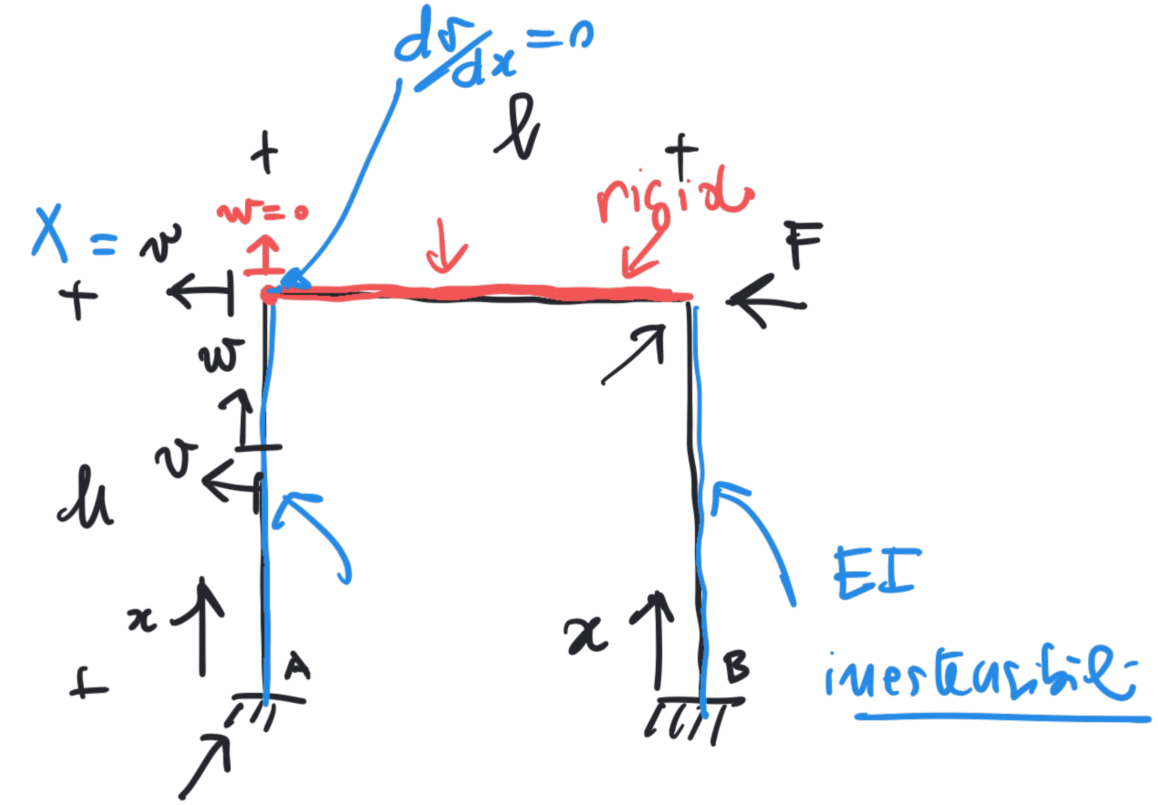


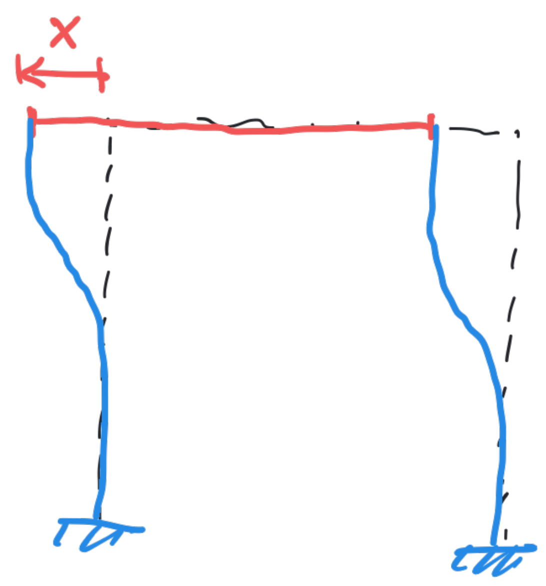
$w(A)=0$

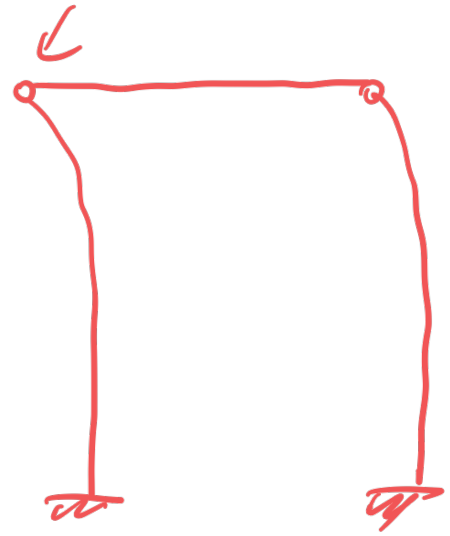
$v(A)=0$

$\frac{dv}{dx}(A)=0$

$$\begin{cases} \frac{dM}{dx} = V & (A) \\ M = EI\frac{d^2v}{dx^2} & \\ \frac{dV}{dx} = 0 & (B) \end{cases}$$

1) $\frac{dw}{dx} = \varepsilon = 0$





(A) + (B) $\Rightarrow \frac{d^2M}{dx^2} = 0$

$$\frac{d^2}{dx^2}\left(\cancel{EI}\,\frac{d^2v}{dx^2}\right) = 0$$

$v(x) = a + bx + cx^2 + dx^3$

$\frac{dv}{dx} = b + 2cx + 3dx^2$

$a = 0$

$b = 0$

$\frac{dv}{dx}(h) = 0$

$\Rightarrow 2c\cancel{h} + 3dh^{\cancel{2}} = 0$

$v(h) = X = ch^2 + dh^3$

$c = -\frac{3}{2}dh$

$X = -\frac{3}{2}dh\,h^2 + dh^3$

$= -\frac{1}{2}dh^3$

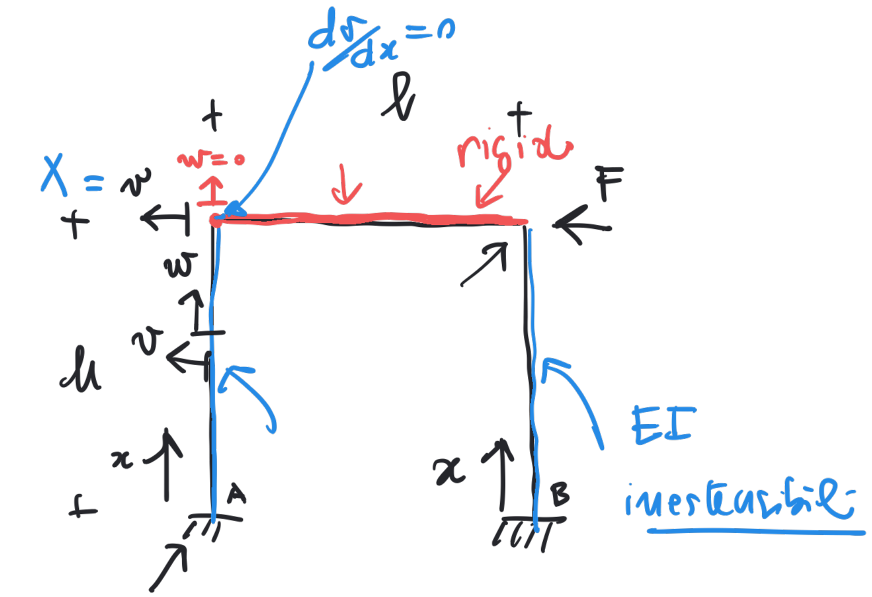
$d = -2\frac{X}{h^3}$

$c = 3\frac{X}{h^2}$

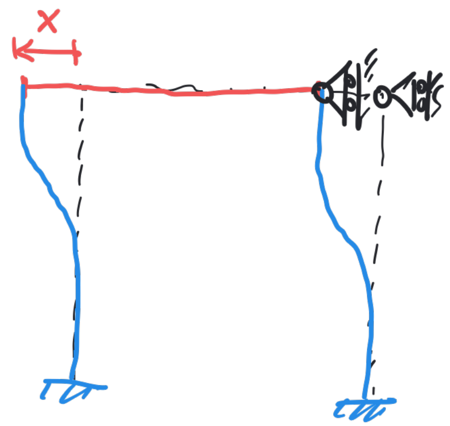
OSSERVAZIONE 

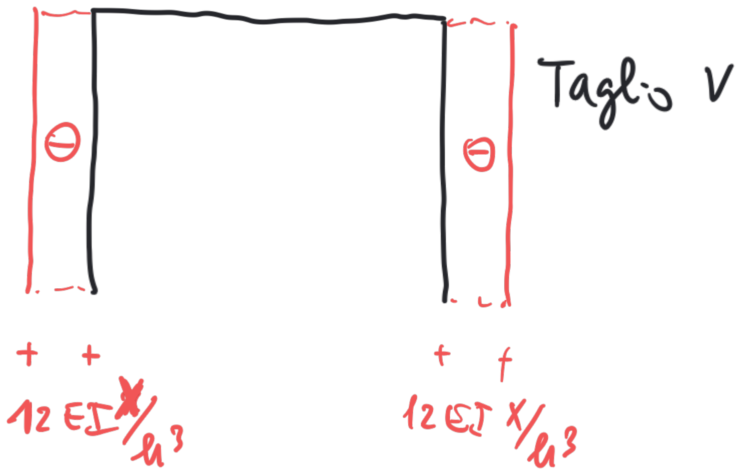
FONDAMENTALE !!!

Se conosciamo gli spostamenti, mediante le equazioni costitutive possiamo determinare le CdS, e dalle CdS possiamo determinare le azioni esterne.



1) $\frac{dw}{dx} = \varepsilon = 0$





$w(A) = 0$

$v(A) = 0$

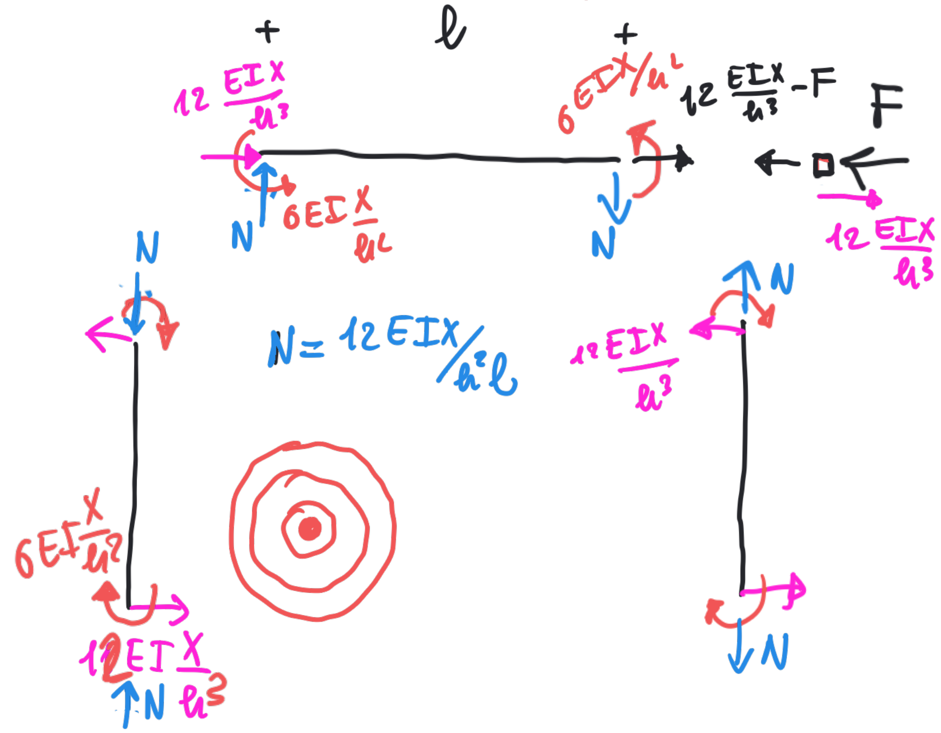
$\frac{dv}{dx}(A) = 0$

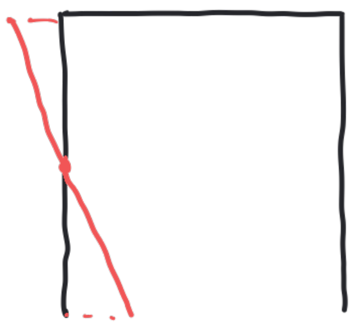
$$\begin{cases} \frac{dM}{dx} = V & \text{(A)} \\ M = EI\,\frac{d^2v}{dx^2} \\ \frac{dV}{dx} = 0 & \text{(B)} \end{cases}$$

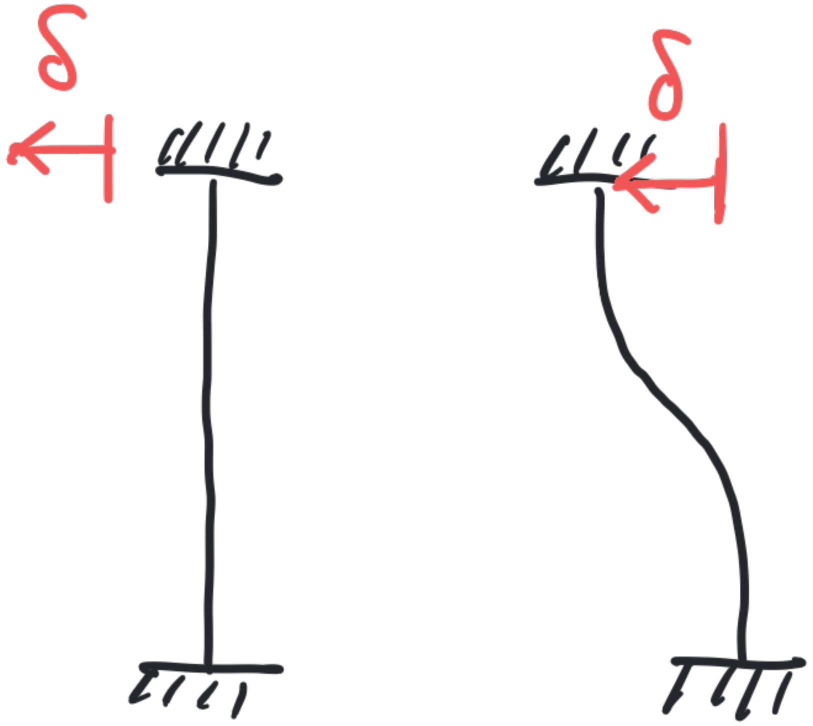
$$v(x) = \left(3\,\frac{x^2}{h^2} - 2\,\frac{x^3}{h^3}\right) X$$

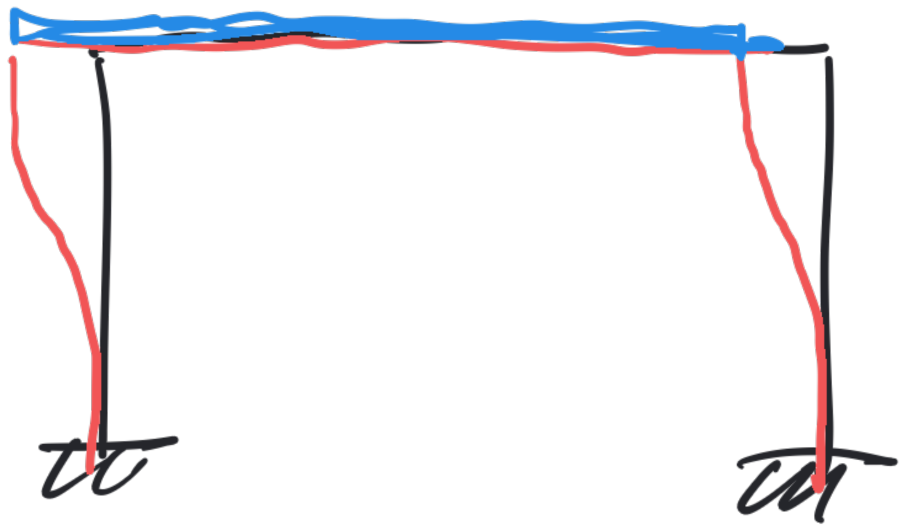
$$M(x) = EI\,\frac{X}{h^2}\,6\left(1 - 2\,x/h\right)$$

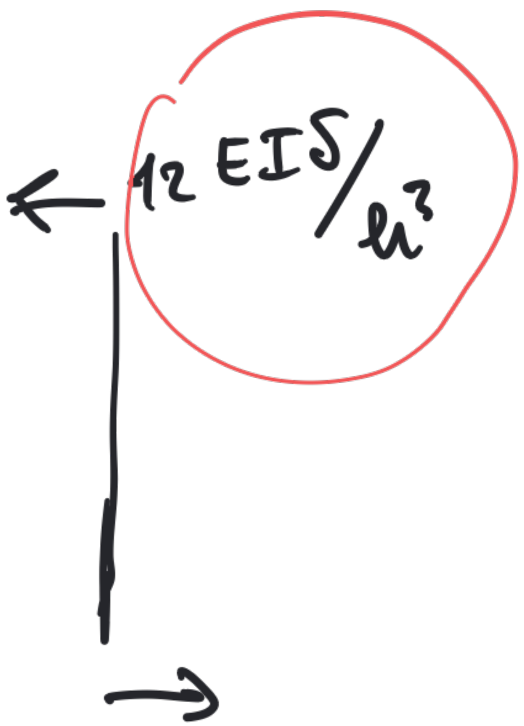
$$V(x) = \frac{dM}{dx} = -12\,EI\,\frac{X}{h^3}$$

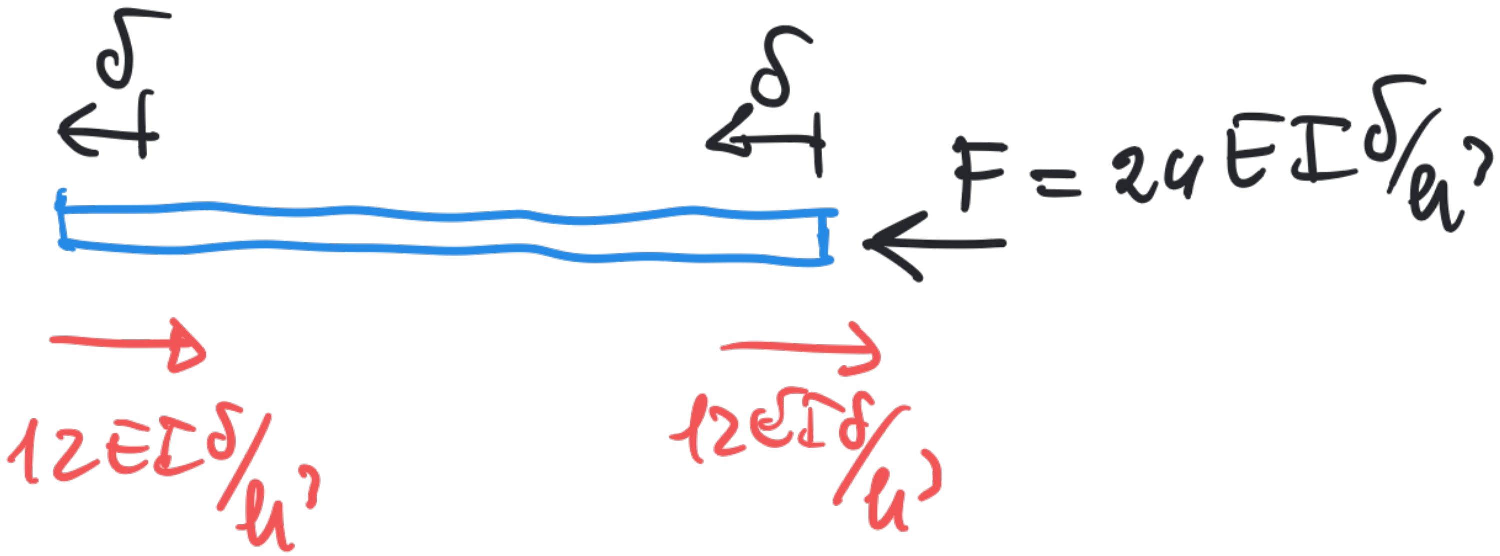





δ
δ




$12\,EI\delta/h^3$


δ
δ
$F = 24\,EI\delta/h^3$
$12EI\delta/h^3$
$12EI\delta/h^3$