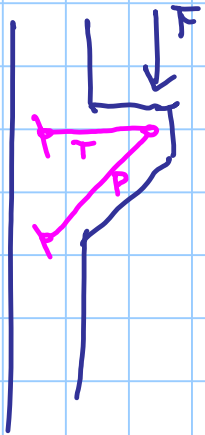


# TAGLIO

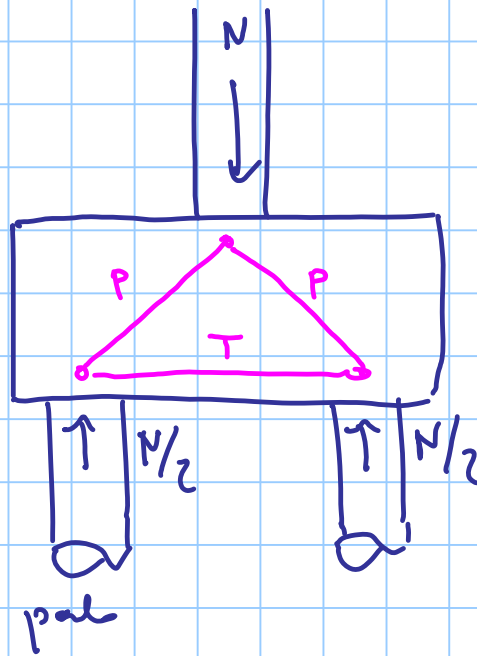
Titolo nota

06/12/2016

elementi molto corti



pilastro

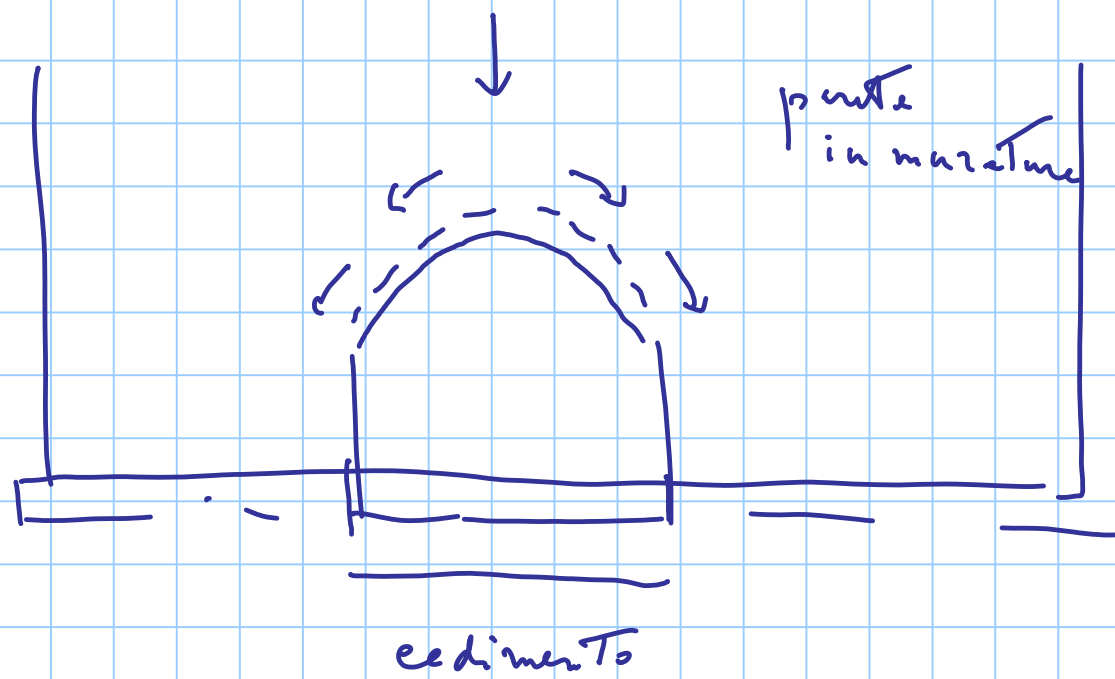


non vale la Teor.  
di De Saint Venant

modello a tirante-puntone

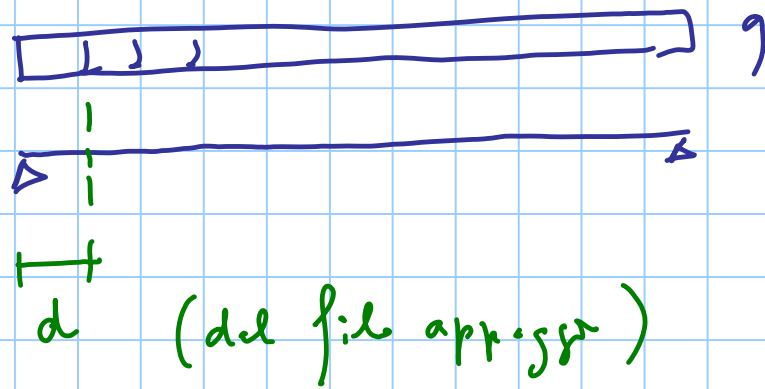
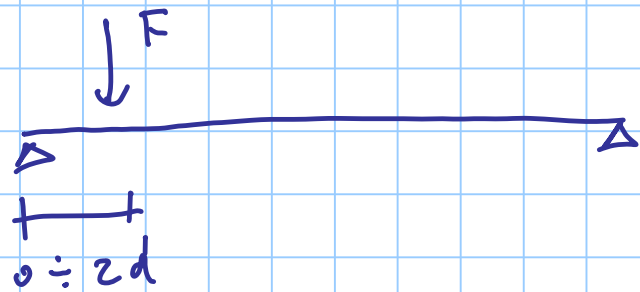
STRUT and TIE

NIENTE  
tagli

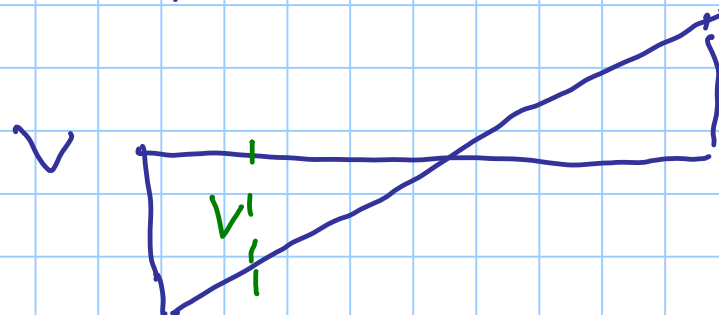
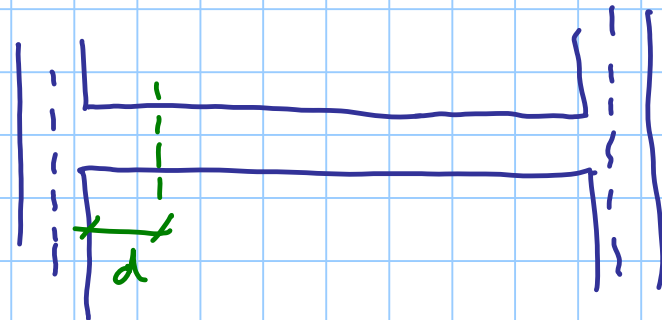


effetto  
arco

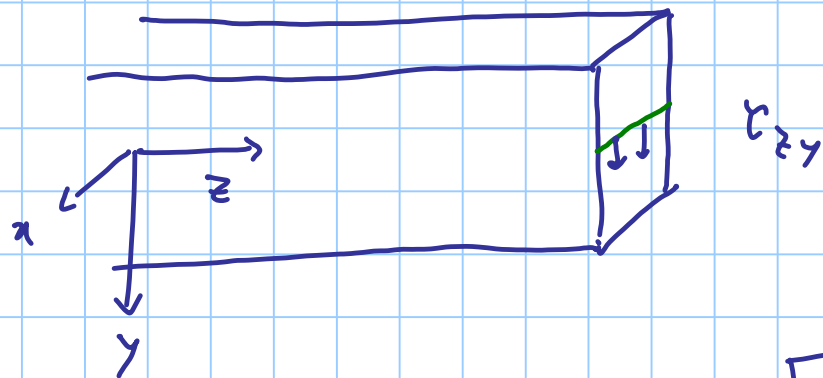
# CONSEGUENZE



forza vicina all'appoggio  
effett. (V) ridotto

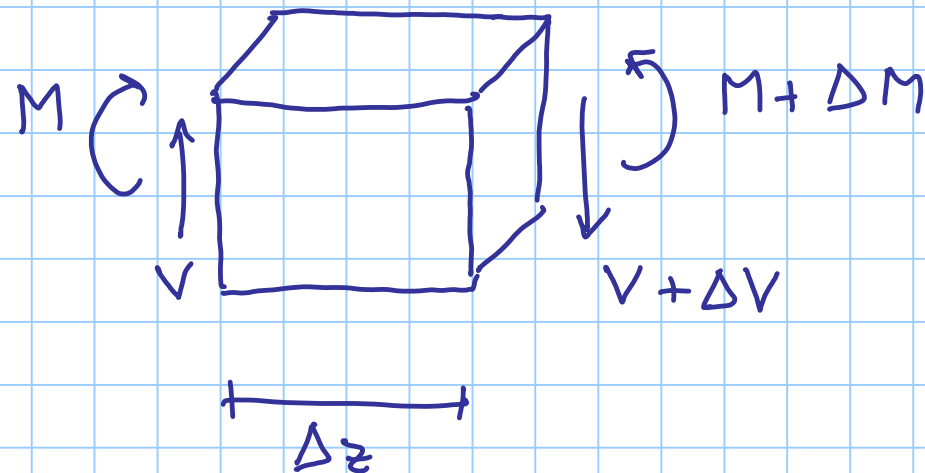


Il  $\tau_{zy}$  -  $V$  -  $\tau_{zy}$



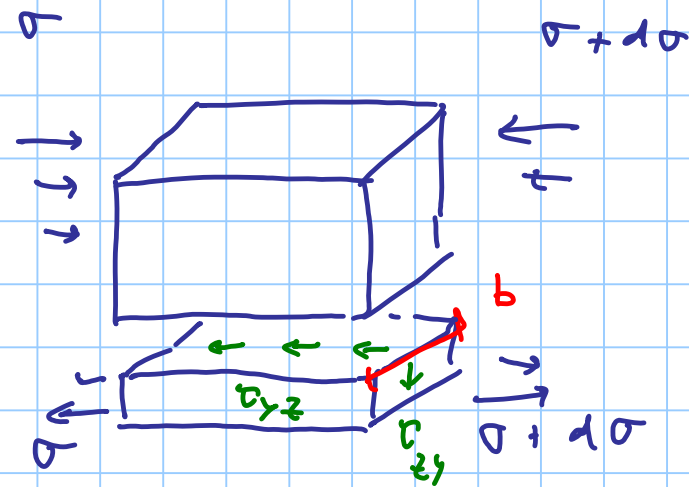
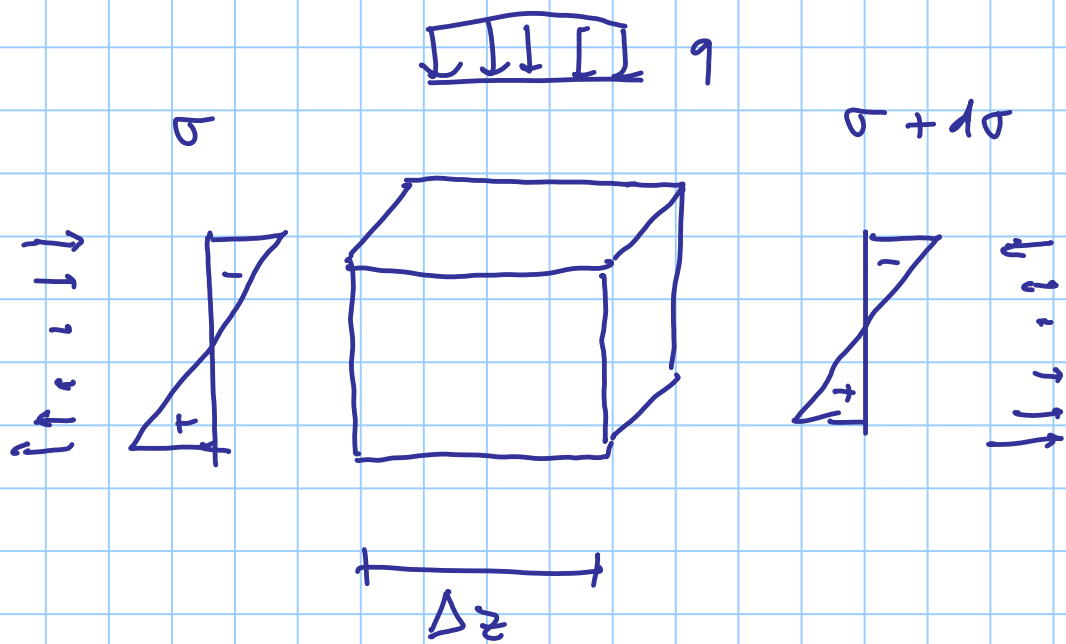
Jouravski:

forza la  $\tau$  media lungo la corda



$$\frac{\Delta M}{\Delta z} = V$$

$$\Delta M \approx V \Delta z$$



$$\sigma = \frac{M}{I} y$$

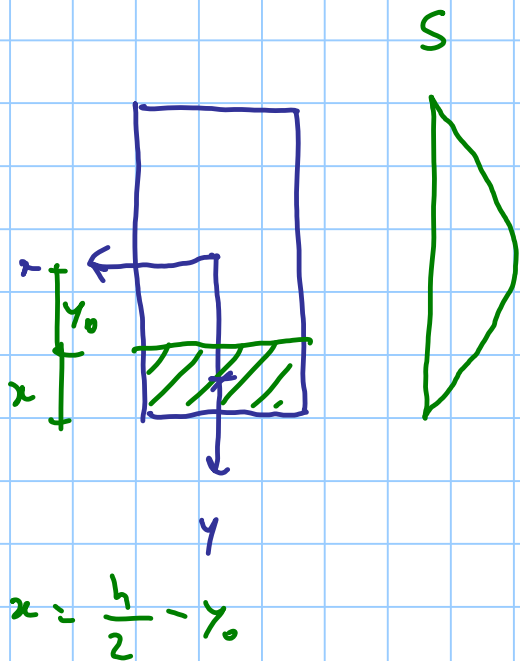
$$\sigma = \frac{M + \Delta M}{I} y$$

$$d\sigma = \frac{\Delta M}{I} y = \frac{V \Delta z}{I} y$$

$$\int_{inf}^{\sup} \Delta \sigma dA_0 = \int_{inf}^{\sup} \tau_{yz} dA_0$$

$$\int \frac{V \Delta z}{I} y dA = \overset{\text{medi.}}{r_{yz}} b \Delta z$$

$$\frac{V \cancel{\Delta z}}{I} S = \overset{\text{medi.}}{r_{yz}} b \cancel{\Delta z} \Rightarrow \overset{\text{medi.}}{r_{yz}} = \frac{V S}{I b}$$



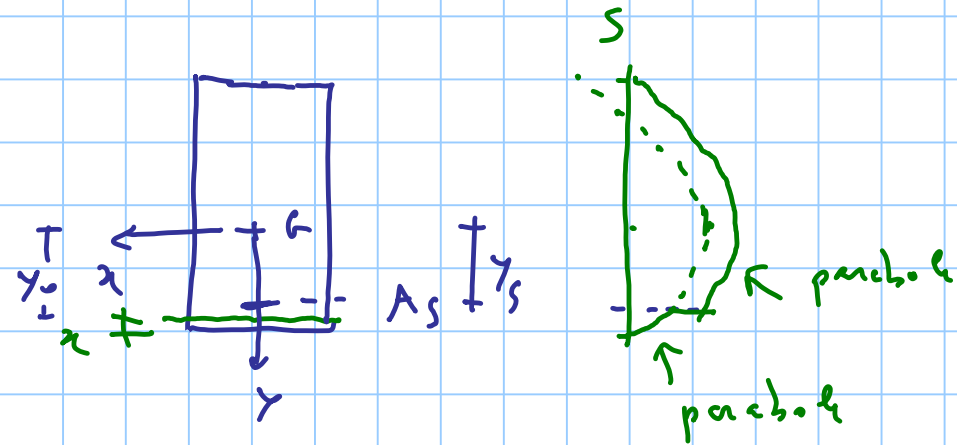
$$S = b x \left( y_0 + \frac{x}{2} \right) =$$

$$= b \left( \frac{h}{2} - y_0 \right) \left( y_0 + \frac{h}{4} - \frac{y_0}{2} \right) =$$

$$= b \left( \frac{h}{2} - y_0 \right) \left( \frac{y_0}{2} + \frac{h}{4} \right) =$$

$$= \frac{b}{2} \left( \frac{h^2}{4} - y_0^2 \right)$$

TAGLIO nel c.a. - I mol. comp.



G baricentro  
non omogeneità.

$$S_o = \frac{b}{2} \left( \frac{h^2}{4} - y_o^2 \right)$$

$$S_s = n A_s y_s$$



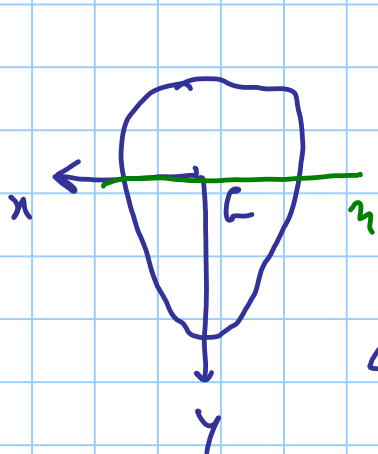
$$V = \int \tau dA$$

$$\tau_c = \frac{V S_c}{I b} = \frac{V}{b z}$$

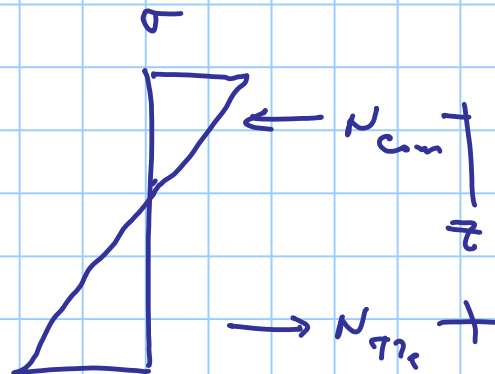
zione rettangolare senza armatura

$$\tau_{max} = \frac{V}{b \cdot \frac{2}{3} h} = 1.5 \frac{V}{b h}$$

$$C_{yz, G} = \frac{V S_G}{I_b}$$



fließen



$$\epsilon = x \gamma$$

$$\sigma = E \epsilon = x E \gamma$$

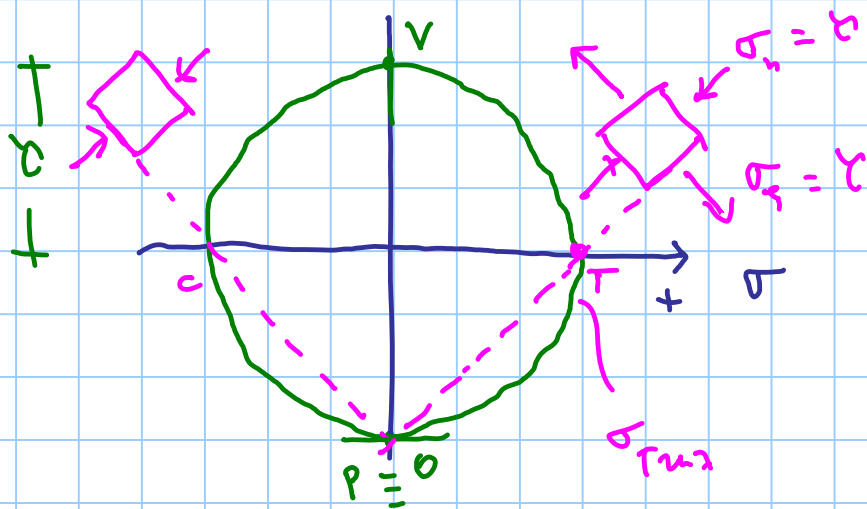
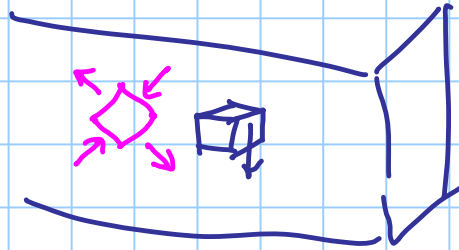
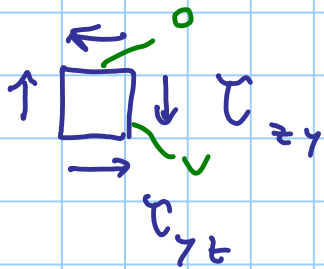
$$M = \int_{-y_{max}}^{y_{max}} \sigma y dA = x E \int y^2 dA = x E I_x$$

$$N_{t_{xz}} = \int_{-y_{max}}^{y_{max}} \sigma dA = x E \int y dA = x E S_{ix}$$

$$z = \frac{M}{N_{t_{xz}}} = \frac{x E I}{x E S} = \frac{I}{S}$$

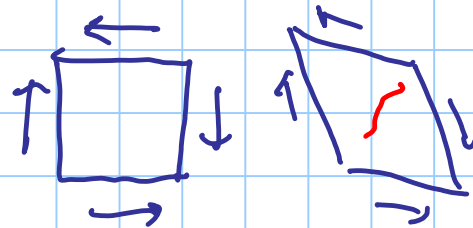
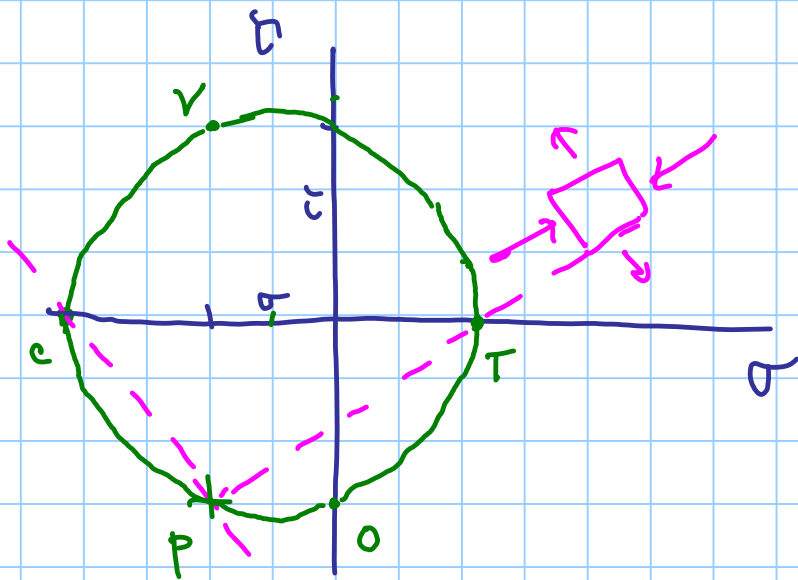
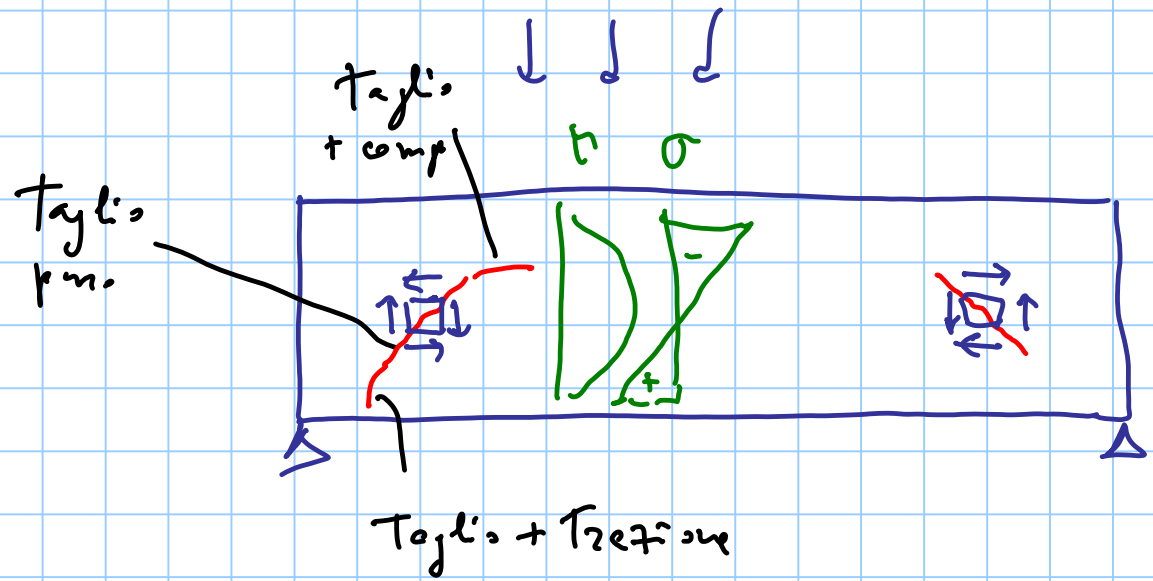
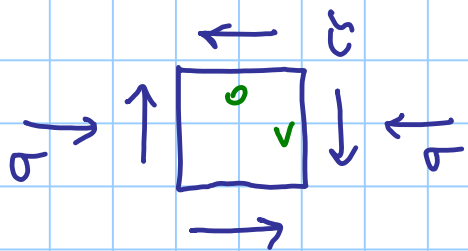
$$\frac{I}{S} = z$$





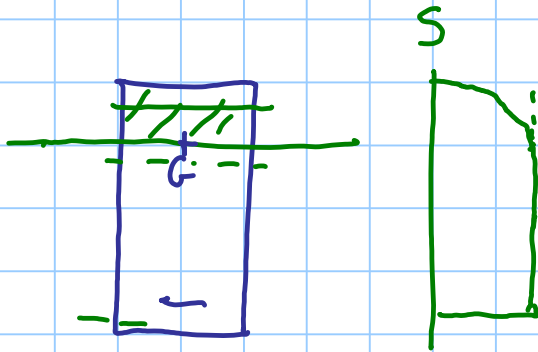
Dal p.o.  $P$  rette // giacitura

il punto di intersezione col cerchio  
indica lo stato tens. nelle giaciture

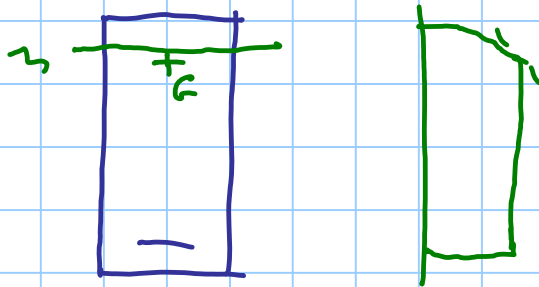


TAGLIO

- II n.d. comp.

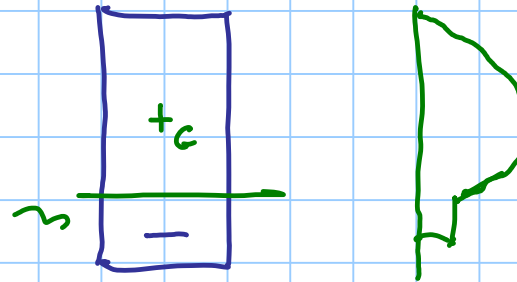


$$M > 0 \quad N = 0$$



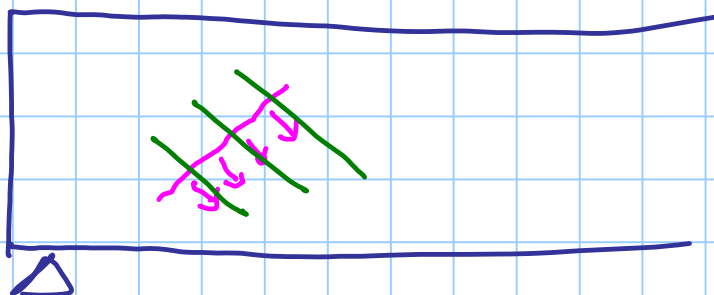
$$M > 0 \quad N > 0$$

$\text{tira}$

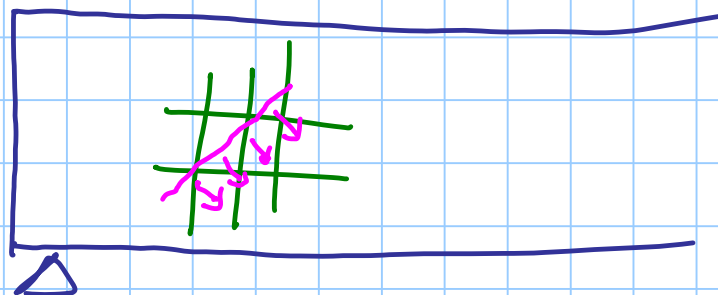


$$M > 0 \quad N < 0$$

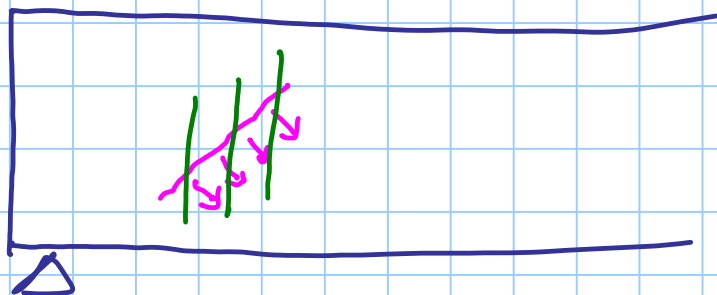
$\text{comp}$



armatura con sagomati



stiffe e ferri di punta



stiffe