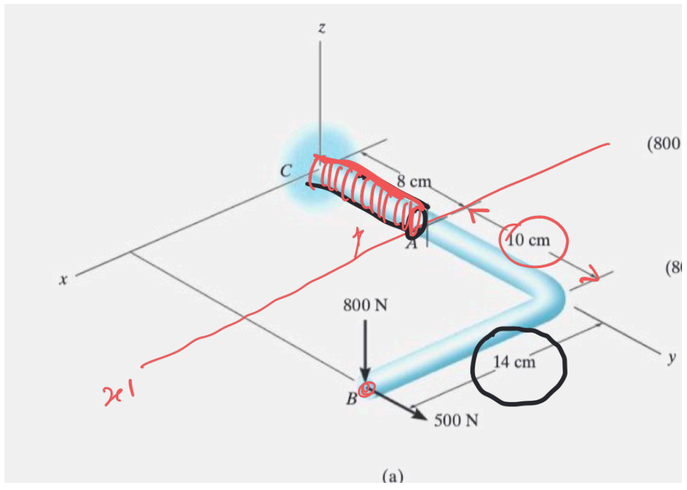
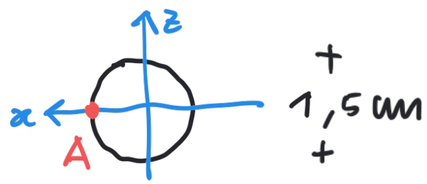
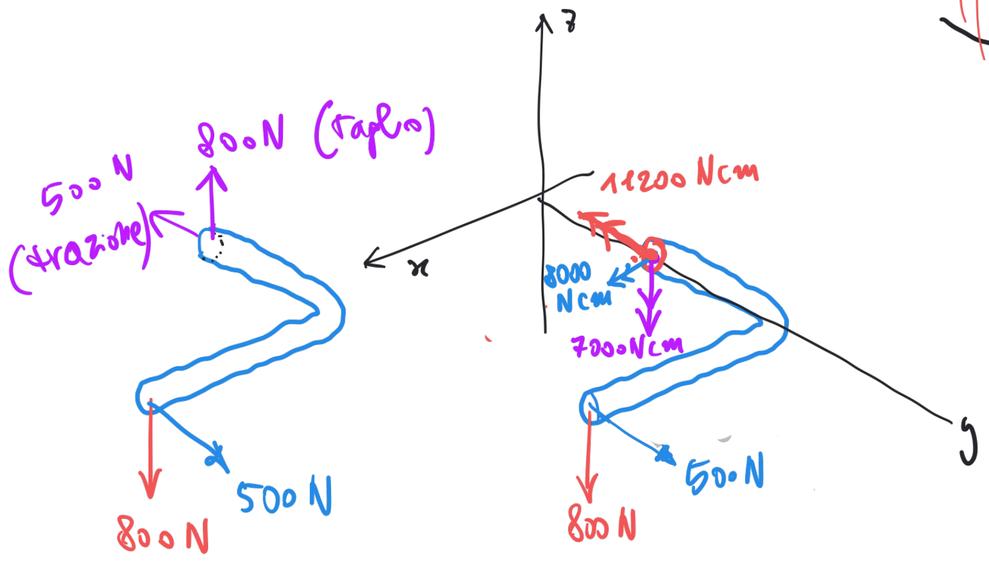
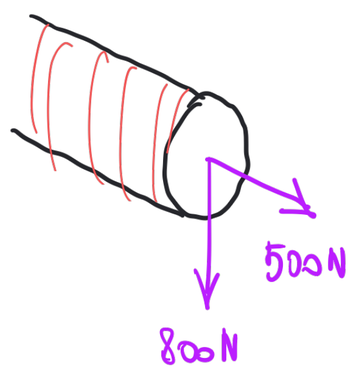


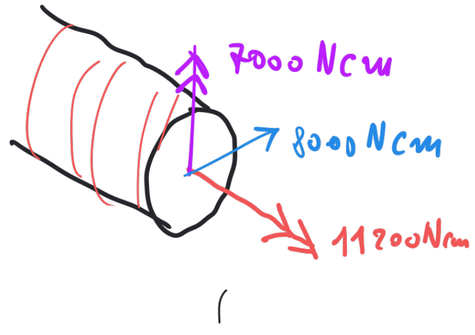
Determinare lo stato tensionale in A.

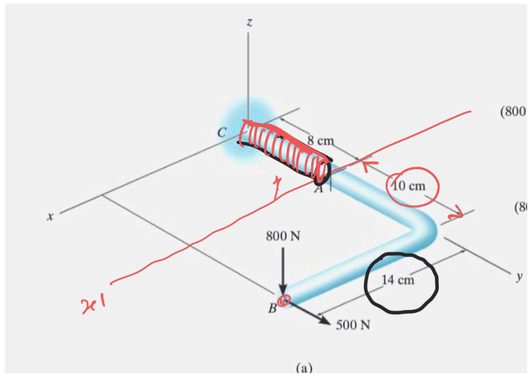


1) Caratt. della sollecitazione

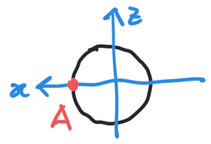








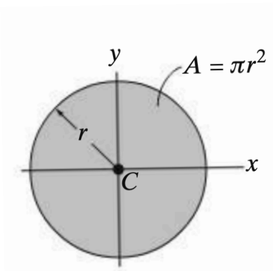
Determinare lo stato tensionale in A.



+ 1.5cm + 0.75 + $A = \pi (0.75)^2$ cm

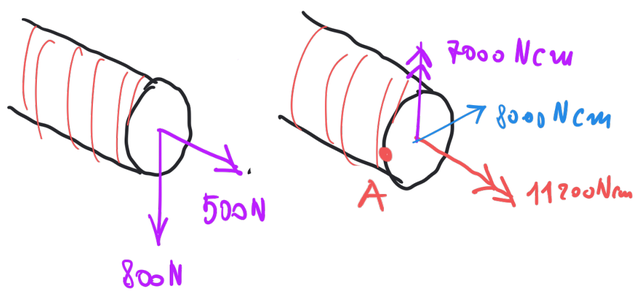
1) Caratt. della sollecitazione

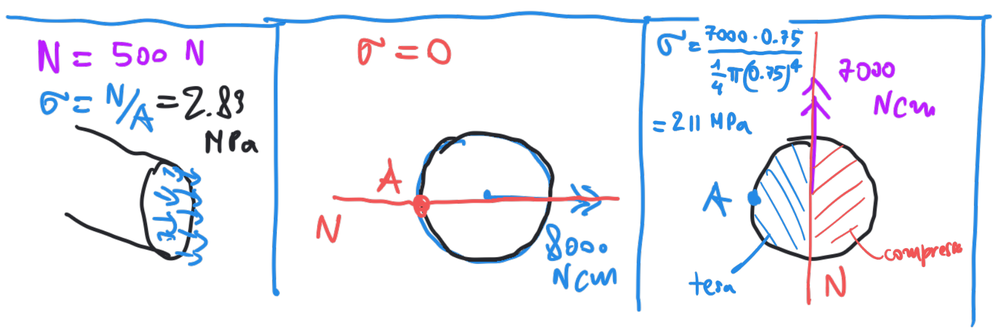
2) Calcolo di σ e τ



$I_x = \frac{1}{4}\pi r^4$

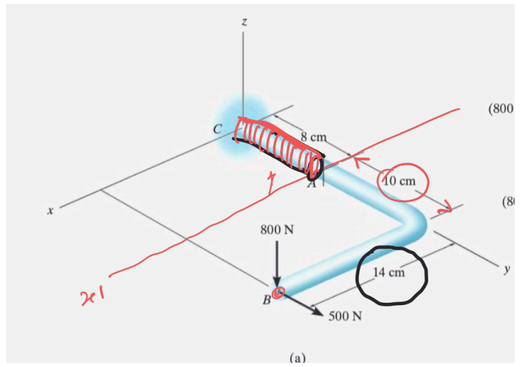
$I_y = \frac{1}{4}\pi r^4$



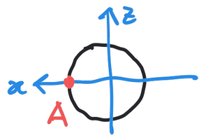


$\sigma_A = (2.83 + 211)$ MPa

$\simeq 214$ MPa

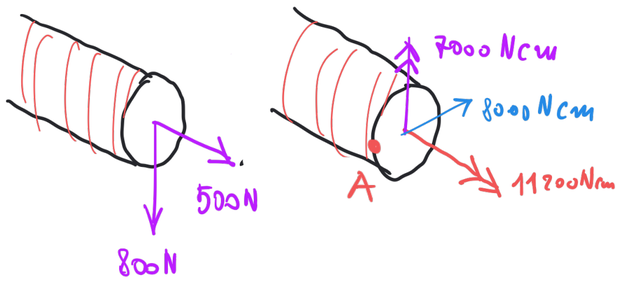


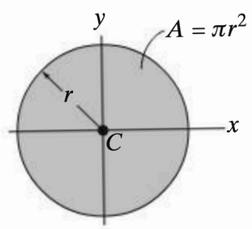
Determinare lo stato tensionale in A.



+ 1.5cm + 0.25 + $A = \pi (0.75)^2 cm$

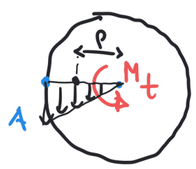
1) Caratt. della sollecitazione
2) Calcolo di σ e τ





$I_x = \frac{1}{4}\pi r^4$
$I_y = \frac{1}{4}\pi r^4$

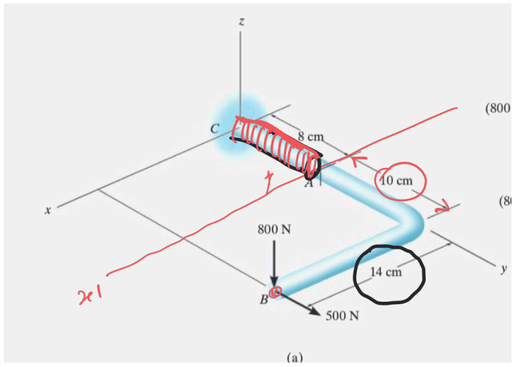
Torsione



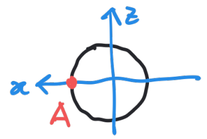
$\tau = \frac{M_t}{I_p} \rho$

$\tau_A = \frac{M_t}{I_p} R = \frac{(11200\,Ncm)(0.75cm)}{\frac{\pi}{2}(0.75cm)^4} = 169\,MPa$

$M_t = 11200\,Ncm$



Determinare lo stato tensionale in A.

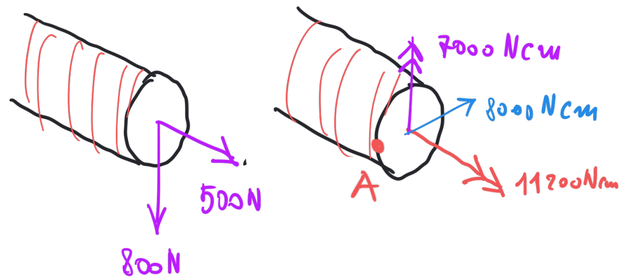


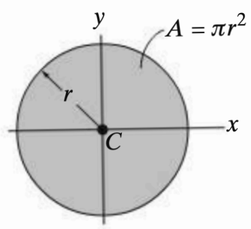
+ 1.5 cm + 0.75 +

$A = \pi (0.75)^2 \text{ cm}$

1) Caratt. della sollecitazione

2) Calcolo di σ e τ

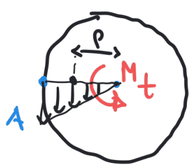




$I_x = \frac{1}{4}\pi r^4$

$I_y = \frac{1}{4}\pi r^4$

Torsione



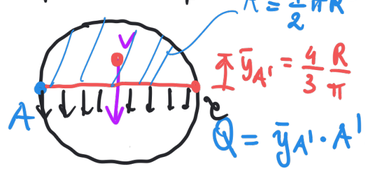
$\tau_A = 169 \text{ MPa}$

$M_t = 11200 \text{ Ncm}$

Taglio

1,5cm

+ $t = 2R$ +



$Q = \bar{y}_{A'} \cdot A' = \frac{4}{3\pi} \frac{1}{2}\pi R^2 = 0{,}28 \text{ cm}^3$

$V = 800 \text{ N}$

$\tau_A = \frac{VQ}{It} = \frac{(800\text{N})(0.28\text{cm}^3)}{\frac{1}{4}\pi(0.75\text{cm})^4(1.5\text{cm})} = 6 \text{ MPa}$

$\tau = \tau^{TORI} + \tau^{TAGLIO}$

$= (169 + 6) \text{ MPa}$