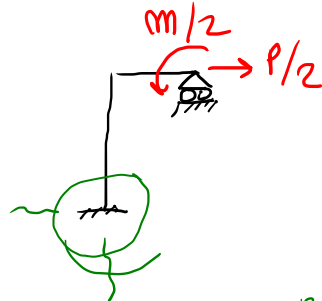
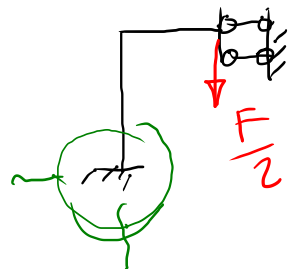
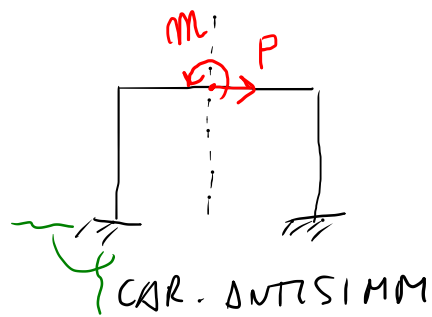
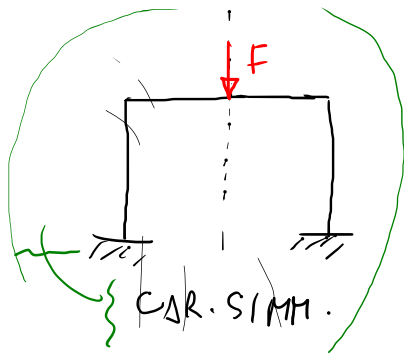
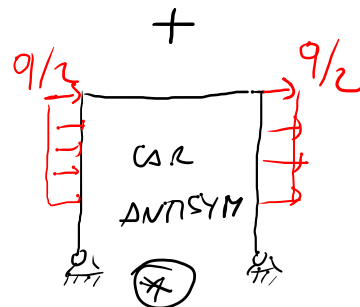
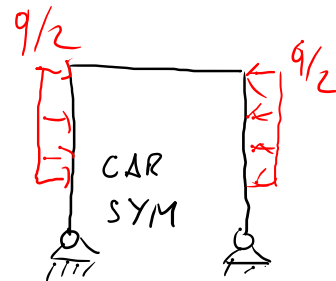
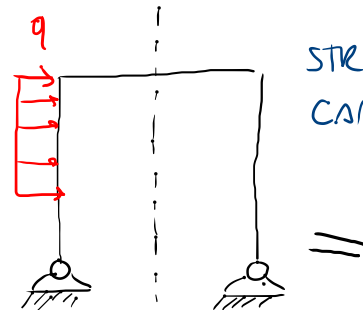
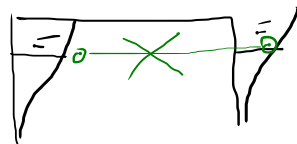
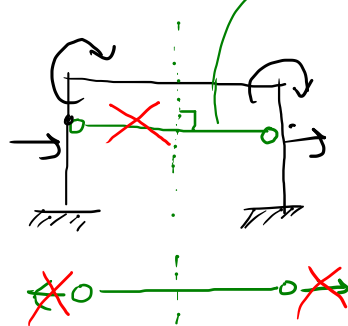
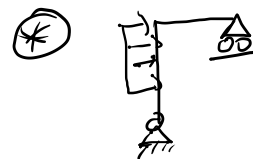




STR. RIDOTTE
CORREITE

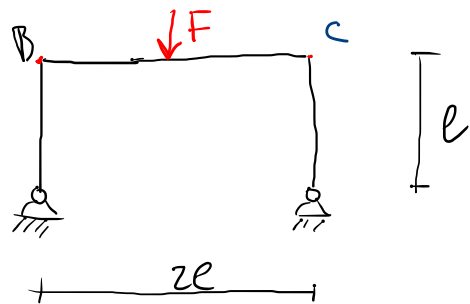


NOTA



14/12/22
POM.

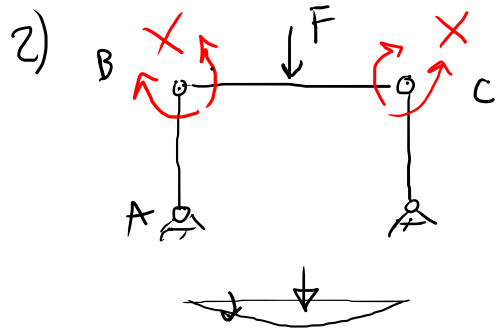
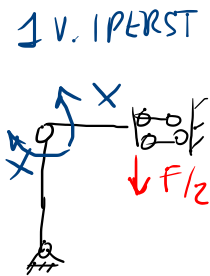
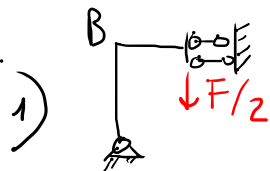
LES



$$\frac{x l}{E J} \left(\frac{1}{3} + \frac{2}{3} + \frac{1}{3} \right) = \frac{F l^2}{16 E J}$$

$$x \cdot \frac{4}{3} = F l \frac{1}{4} \Rightarrow \boxed{x = \frac{3}{16} F l}$$

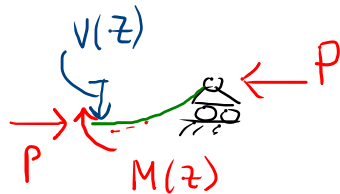
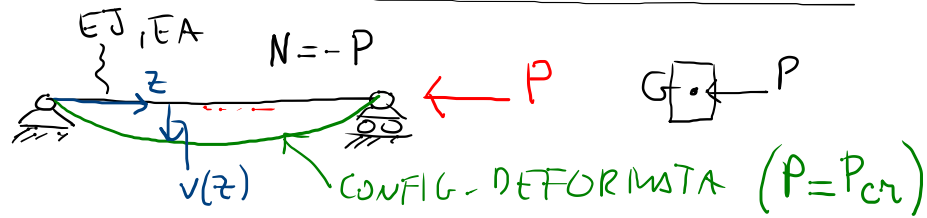
DUE STRADE:



$$\boxed{\varphi_{BA} = \varphi_{BC}} \quad \curvearrowright$$

$$-\frac{x l}{3 E J} = \frac{x \cdot 2 l}{3 E J} + \frac{x \cdot 2 l}{6 E J} - \frac{F (2 l)^2}{16 E J}$$

CENNI AL CORSO CRITICO DI EULERO (INSTABILITA' DELL'EQUILIBRIO)


$$M(z) = P_v(z) > 0$$

EQUAZIONE LINEARE ELASTICA

$$v''(z) = -\frac{M(z)}{EJ} \quad ; \quad \begin{cases} EJ v''(z) + P v(z) = 0 \rightarrow v'' + \alpha^2 v = 0 \rightarrow v(z) = C_1 \sin \alpha z + C_2 \cos \alpha z \\ \alpha^2 = P/EJ \end{cases}$$

$v(0) = 0 \Rightarrow C_2 = 0$
 $v(l) = 0 \Rightarrow C_1 \sin \alpha l = 0$
 $\sin \alpha l = 0 \Rightarrow \alpha l = n\pi$

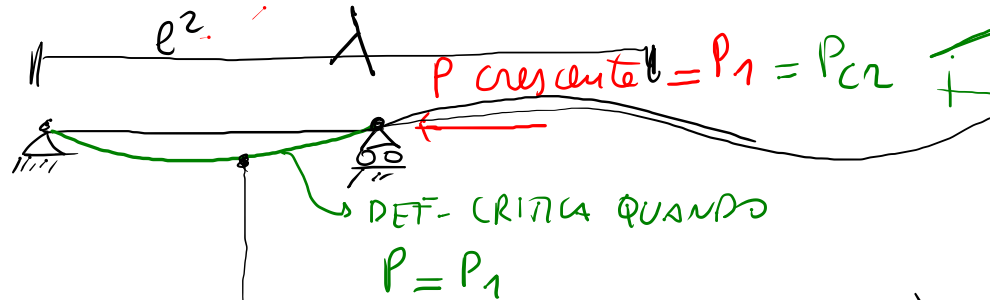
$$n \neq 1, 2, 3, \dots$$

$$\alpha^2 = \frac{m^2 \pi^2}{\ell^2} \Rightarrow \boxed{\frac{P_m}{EJ} = \frac{m^2 \pi^2}{\ell^2}}$$

INTEGRALE GEN.

$$P_m = m^2 \frac{\pi^2}{l^2} EJ \quad (m=1, 2, 3, \dots)$$

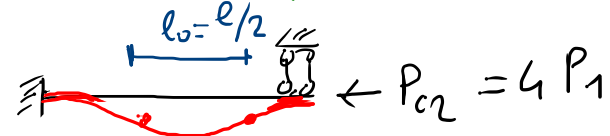
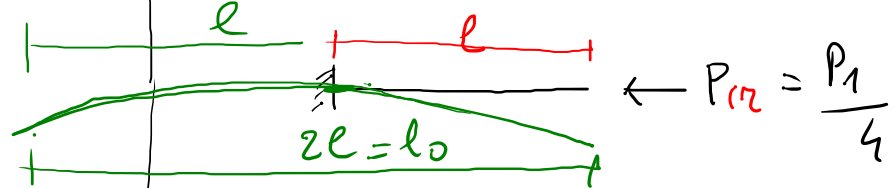
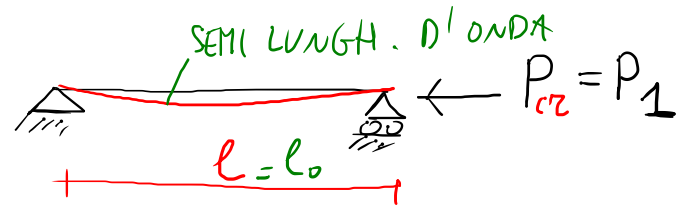
$$P_1 = \frac{\pi^2}{l^2} EJ = P_{cr} \quad \text{CARICO CRITICO DI EULERO}$$



$$v(z) = C_1 \sin \alpha z \quad ; \quad \text{con } \alpha = \frac{\pi}{l} \quad (m=1)$$

$$= C_1 \sin \frac{\pi}{l} z \Rightarrow \text{SINUSOIDE CON LUNGH. D'ONDA } \lambda = 2l$$

C_1 AMPIEZZA (NON È DEFINITA)



$$P_{cr} = \frac{\pi^2}{l_0^2} EJ$$

l_0 : LUNGH. LIBERA DI INFLESSIONE