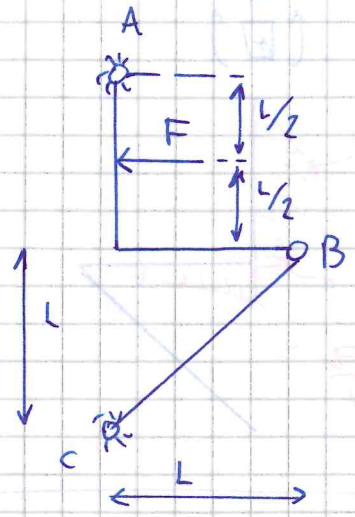
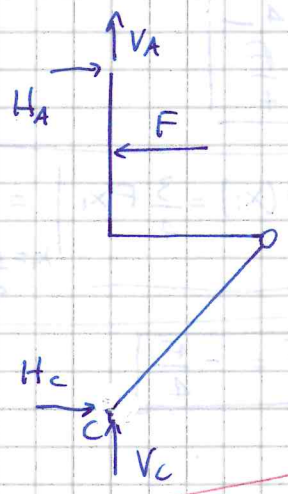
ESERCIZIO 2



CALCOLARE:

1) REAZIONI VINCOLARI
2) AZIONI INTERNE

1) SVINCOLO PTO A e C

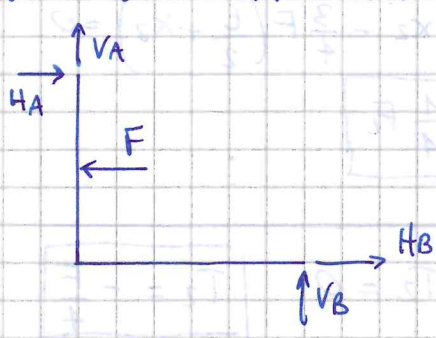


$\sum M_C = 0 \quad \frac{F}{2} 3L - H_A 2L = 0 \quad \boxed{H_A = \frac{3}{4}F}$

$\sum F_x = 0 \quad H_A + H_C - F = 0 \quad \boxed{H_C = \frac{F}{4}}$

$\sum F_y = 0 \quad V_A + V_C = 0$

SVINCOLO ASTA SUPERIORE

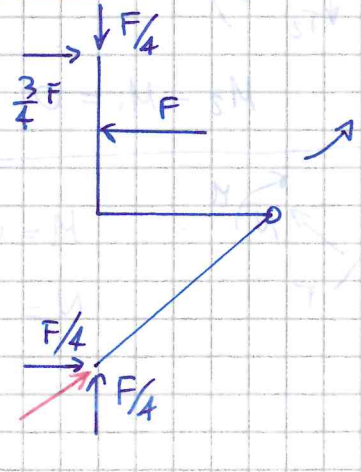


$\sum F_x = 0 \quad H_A + H_B - F = 0 \quad \boxed{H_B = \frac{F}{4}}$

$\sum M_B = 0 \quad \frac{FL}{2} - H_A L - V_A L \quad \boxed{V_A = -\frac{F}{4}}$

$\sum F_y = 0 \quad V_A + V_B = 0 \quad \boxed{V_B = \frac{F}{4}}$

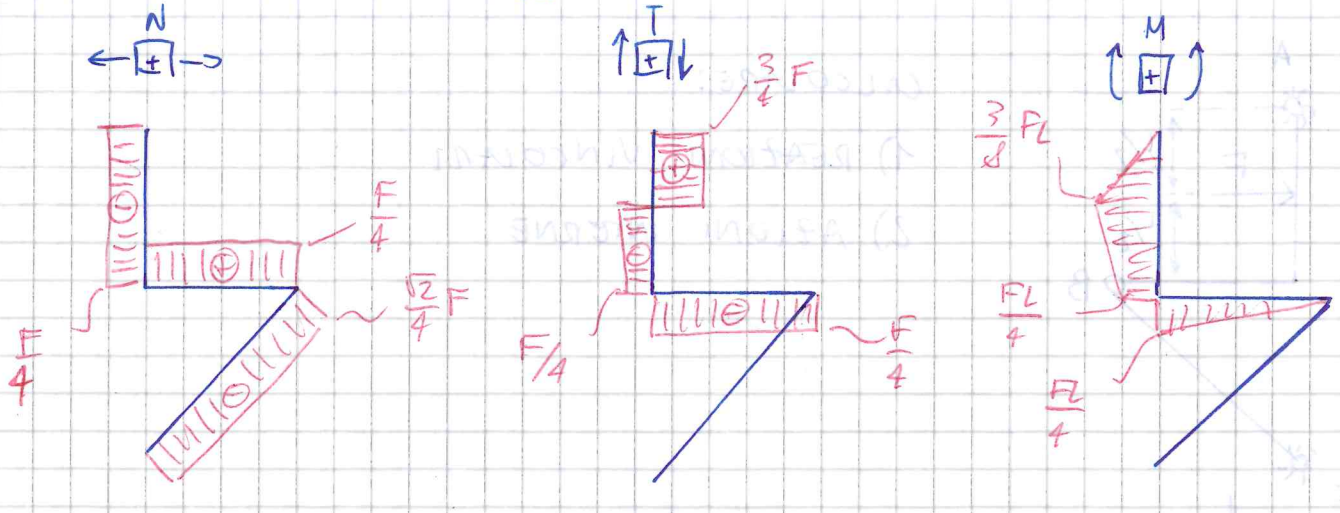
$\boxed{V_C = \frac{F}{4}}$



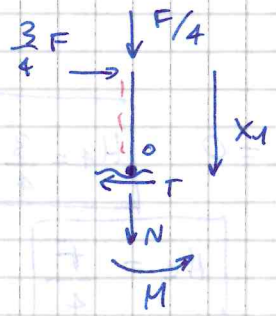
REAZIONI VINCOLARI

⇒

AZIONI INTERNE (← ↑ [+] ↓ →)



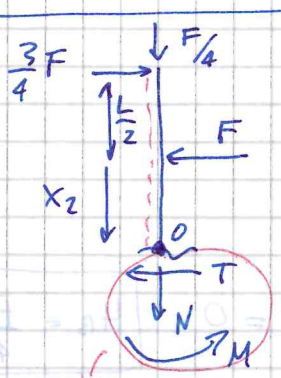
CONTI:



$\sum F_x = 0 \quad \frac{3}{4}F - T = 0 \quad \boxed{T = \frac{3}{4}F}$

$\sum F_y = 0 \quad -\frac{F}{4} - N = 0 \quad \boxed{N = -\frac{F}{4}}$

$\sum M_o = 0 \quad M(x_1) + \frac{3}{4}F x_1 = 0 \quad \boxed{M(x_1) = \frac{3}{4}F x_1 \;\Big|_{x_1 = \frac{L}{2}} = \frac{3}{8}FL}$



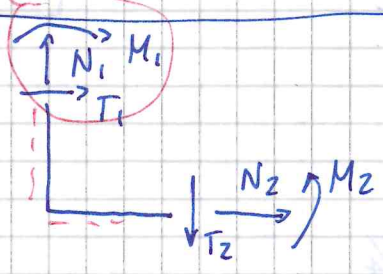
$\sum F_x = 0 \quad \frac{3}{4}F - F - T = 0 \quad \boxed{T = -\frac{F}{4}}$

$\sum F_y = 0 \quad \boxed{N = -\frac{F}{4}}$

$\sum M_o = 0 \quad M(x_2) + F x_2 - \frac{3}{4}F\left(\frac{L}{2} + x_2\right) = 0$

$\Rightarrow \boxed{M\left(\frac{L}{2}\right) = \frac{1}{4}FL}$

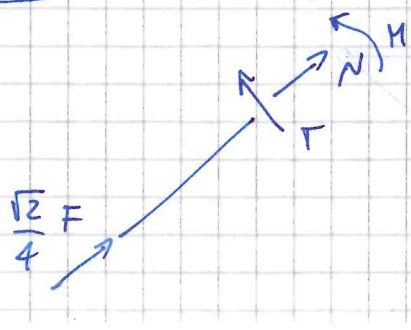
VERSO OPPOSTO



$\sum F_y = 0 \quad N_1 - T_2 = 0 \quad \boxed{T_2 = -\frac{F}{4}}$

$\sum F_x = 0 \quad T_1 + N_2 = 0 \quad \boxed{N_2 = \frac{F}{4}}$

$\sum M = 0 \quad M_2 - M_1 = 0 \quad \boxed{M_1 = M_2}$



$M = 0 \quad T = 0$

$N = -\frac{\sqrt{2}}{4}F \quad \Rightarrow$ BC è BIELLA