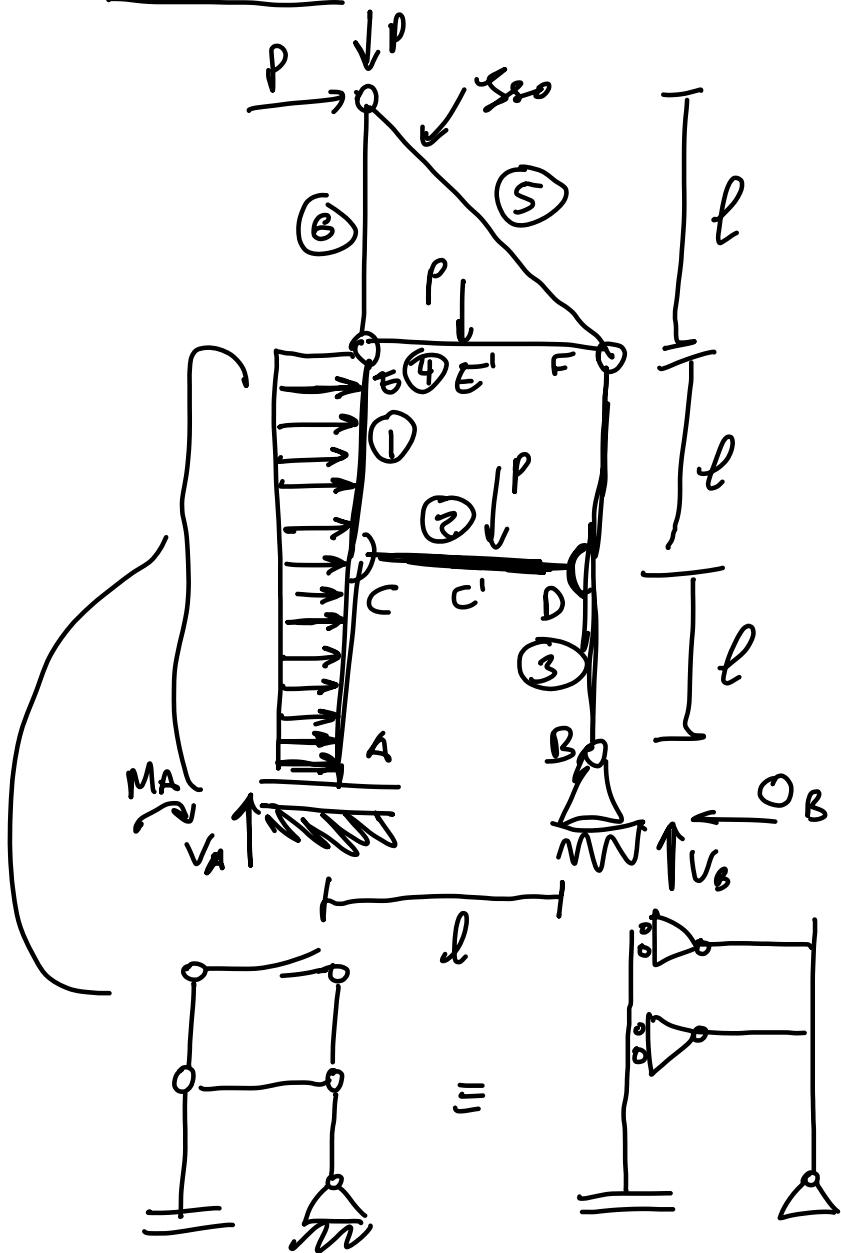


Tutorato 2

Esercizio 3



Analisi Cinematografica:

$$gold = 6 \cdot 3 = 18$$

$$golw = 2+2+2+2+2+4+4=19$$

CANDIDATO EGO

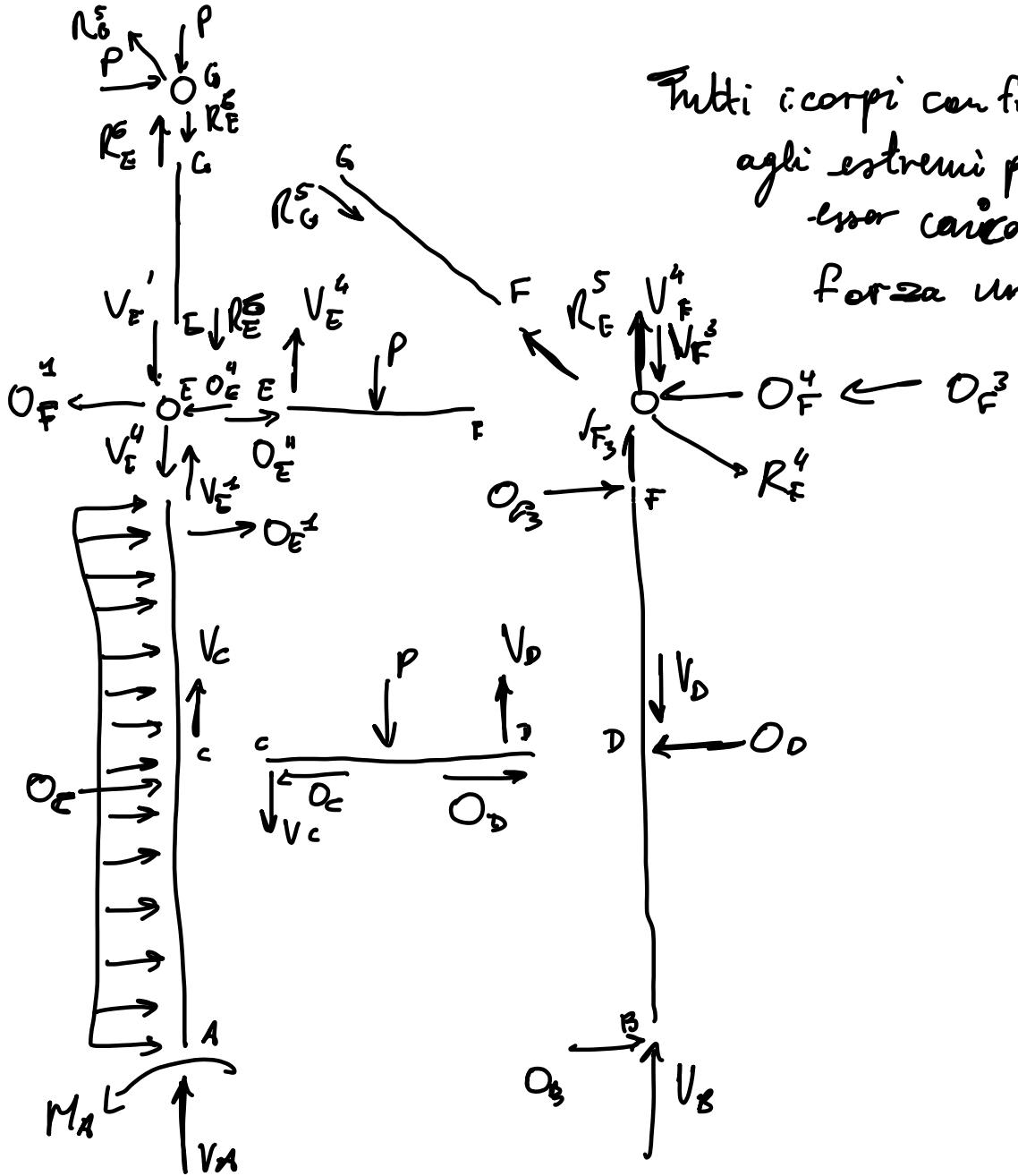
A hand-drawn diagram of a simple pendulum. It features a vertical line representing the string, with a horizontal line extending to the right from its top. A small circle is attached to the end of the horizontal line, representing the mass of the pendulum.

Iso statics

Residui Vinozlori

$$\rightarrow)^+ O_8 + \frac{P}{\ell} \cdot 2\ell + P = 0$$

$$O_3 = -3P$$



Tutti i corpi con forze solo agli estremi possono esser caricato con una forza unica

[2]

$$\leftarrow \quad P \cdot \frac{l}{2} - V_D l = 0 \rightarrow V_D = \frac{P}{2}$$

$$\downarrow \quad P - \frac{P}{2} - V_C \Rightarrow V_C = \frac{P}{2}$$

[4]

$$\leftarrow \quad \frac{P e}{2} - V_F l = 0 \Rightarrow V_F = \frac{P}{2}$$

$$\uparrow^+ V_E^4 = \frac{P}{2}$$

3

$$\leftarrow^+ O_B \cdot l - O_F^3 \cdot l \rightarrow O_F^3 = O_B = -3P$$

$$\rightarrow^+ O_F^3 + O_D^3 + O_G^3 = 0$$

$$O_D = -6P$$

2

$$\rightarrow^+ O_D - O_C = 0$$

$$O_C = O_D = -6P$$

1

$$\rightarrow^+ M_A + O_C l + 2Pl = 0$$

$$M_A = 4Pl$$

$$\rightarrow^+ O_E^1 + 2P + O_C = 0$$

$$O_E^1 = 4P$$

Nodo E

$$\leftarrow^+ O_E^4 + O_E^2 \Rightarrow O_E^4 = -4P$$

4

$$\rightarrow^+ O_E^4 + O_F^4 = 0 \Rightarrow O_F^4 = -O_E^4 = 4P$$

Nodo F

$$\rightarrow)^+ R_F^5 \frac{\sqrt{2}}{2} - O_F^4 - O_F^3 = 0$$

$$R_F^5 = \frac{2}{\sqrt{2}} (4P - 3P) = \sqrt{2} P$$

$$\downarrow)^+ V_F^5 + V_F^3 + R_F^5 \frac{\sqrt{2}}{2} = 0$$

$$V_F^5 = \frac{-3}{2} P$$

5

$$\downarrow)^+ R_G^5 - R_F^5 = 0$$

$$R_G^5 = R_F^5 = \sqrt{2} P$$

6

$$\uparrow)^+ R_G^5 \frac{\sqrt{2}}{2} - P - R_G^6 \Rightarrow R_G^6 = 0$$

6

$$R_G^6 = 0$$

Nodo E

$$\downarrow)^+ V_E^1 + V_E^4 - \underbrace{R_E^6}_0$$

$$V_E^1 = -V_E^4 = -\frac{P}{2}$$

7

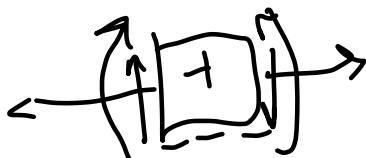
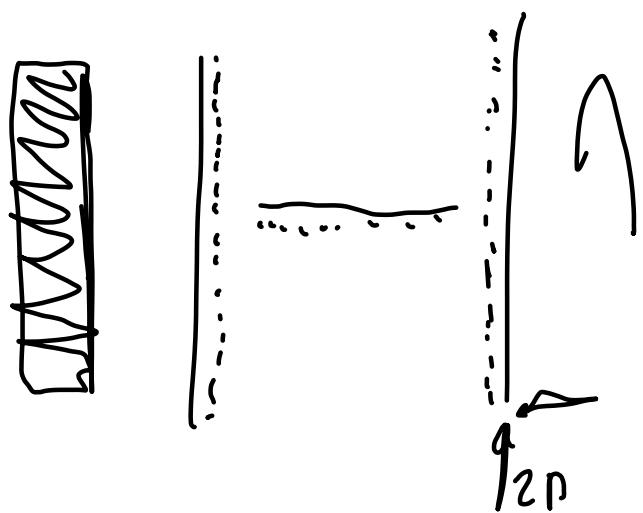
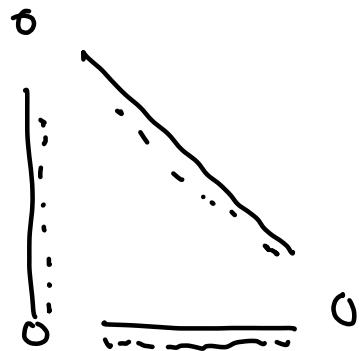
$$\uparrow)^+ V_A : V_E^1 + V_C = 0$$

$$V_A = P$$

[5]

$$\uparrow)^+ V_B - V_o + V_F^s = 0$$

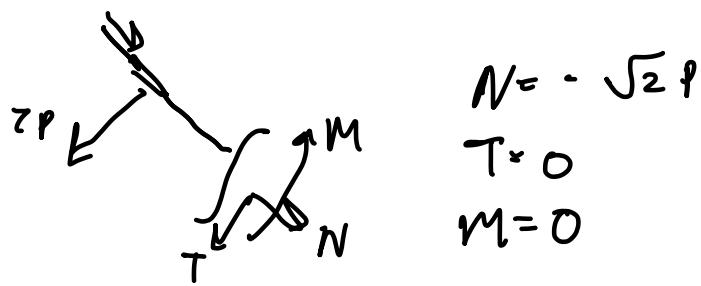
$$N_\beta = 2p$$



[6]

$N = M = T = 0 \rightarrow$ tutto il corpo è scarico

5 $0 \leq x \leq \sqrt{2}e$

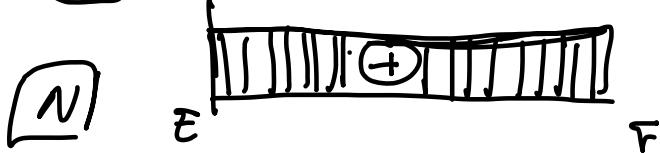


$$N = -\sqrt{2}F$$

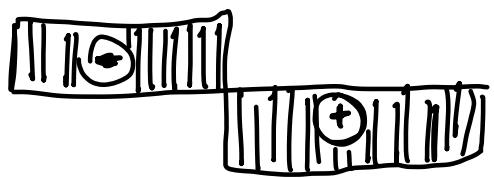
$$T = 0$$

$$M = 0$$

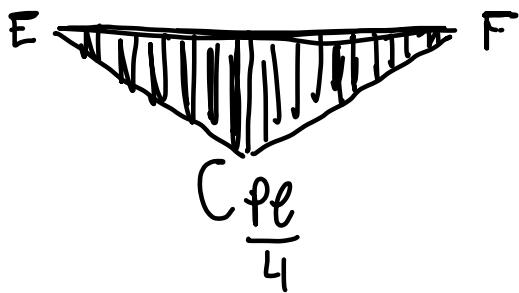
4



T



M

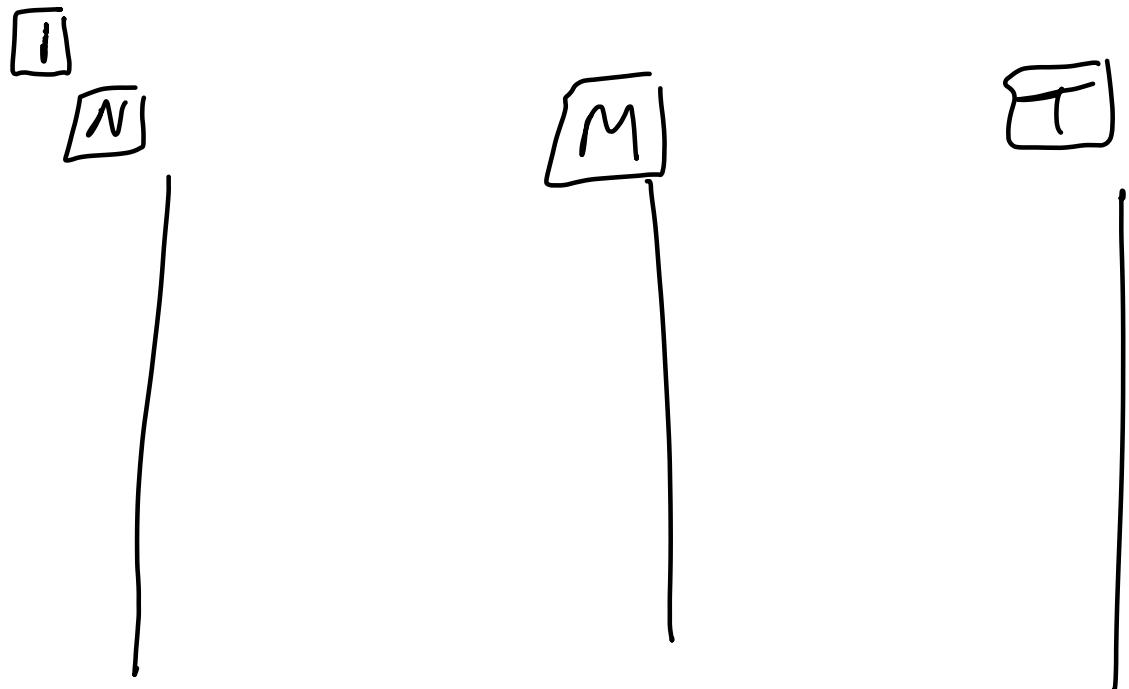


2



M uguale corso 4

T uguale corso 4



$S_6) \quad 0 < x < l$

$$\frac{P}{l}x \quad \downarrow \quad \leftarrow \quad \rightarrow \quad \downarrow$$

$$T_N \quad P/l \quad 4P \quad \frac{P}{l} \quad P/2$$

$$J_x$$

$$\downarrow \quad \leftarrow \quad \rightarrow \quad \downarrow$$

$$N = -\frac{P}{2}$$

$$T - 4P \quad \frac{P}{l} \quad x = 0$$

$$x = 0 \quad x = l$$

$$T = 4P \quad T = 5P$$

$$S_2) \quad M + \frac{P}{l} \frac{x^2}{2} + 4P_{x=0}$$

$$x = 0 \quad x = l$$

$$M_E = 0 \quad M_E = -\frac{q}{2} l^2$$

$$T_P \quad q_P \quad \frac{q}{l} \quad N$$

$$J_x$$

$$N = -P$$

$$T = -\frac{P}{l}x$$

$$\sum M = -4P\ell - \frac{P}{\ell} \frac{x^2}{2}$$

$$\left\{ \begin{array}{l} x=0 \\ M_A = -4P\ell \end{array} \right.$$

$$\left\{ \begin{array}{l} x=\ell \\ M_C = -\frac{9}{2}P\ell \end{array} \right.$$

