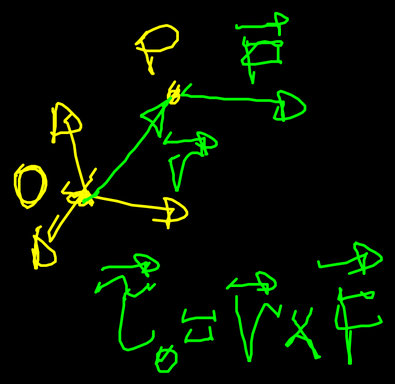
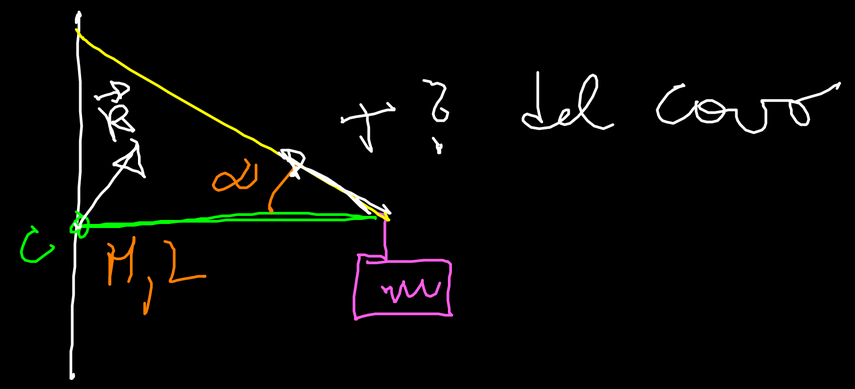
EQUILIBRIO STATICO DI UN CORPO RIGIDO

$$\sum \vec{F}_{est} = 0$$

$$\sum \vec{\tau}_{O,est} = 0$$

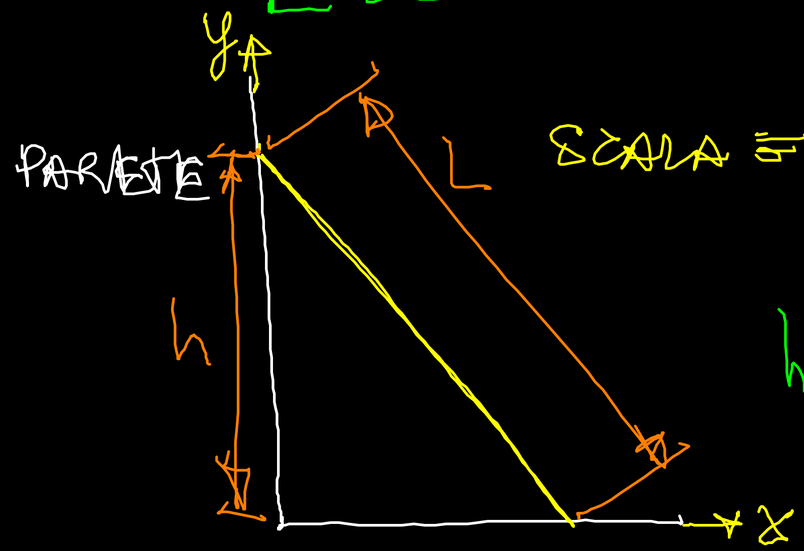


ESEMPIO

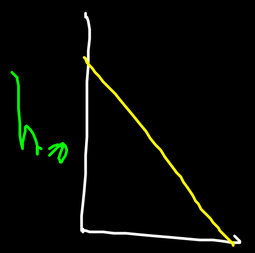


τ ? del cavo

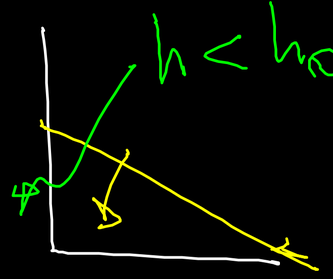
ESEMPIO → SCALA



SCALA = ASTA OMOG. CON M, L

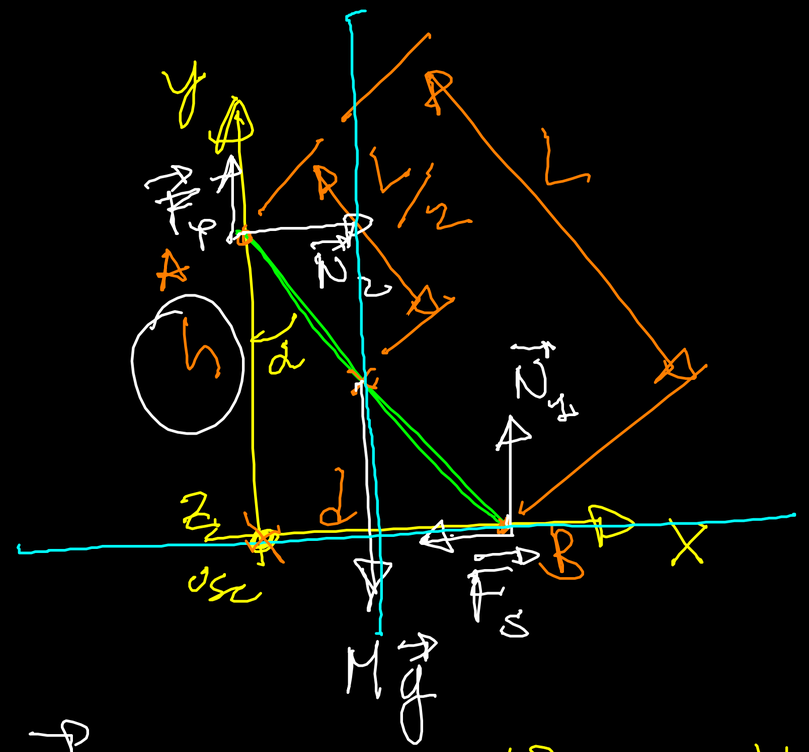


OK



NO

PAVIMENTO



$$\sum \vec{F}_{ext} = 0 \qquad \begin{cases} N_2 - F_s = 0 \\ F_p + N_1 - Mg = 0 \end{cases} \Rightarrow N_1, N_2$$

$$\sum \vec{\tau}_{ext,O} = 0$$

$$\sum \left(\vec{\tau}_{ext,A}\right)_z = 0$$

$$\begin{cases} -\frac{L}{2} Mg \sin\alpha & \text{Peso} \\ +(L \sin\alpha) N_1 & \text{Reaz. Norm.} \\ -h F_s = 0 & \text{attrito} \end{cases}$$

$$|\vec{F}_s| \le \mu_s N_1 \qquad |\vec{\tau}| = r_\perp |\vec{F}|$$

$$|\vec{F}_p| \le \mu_p N_2$$

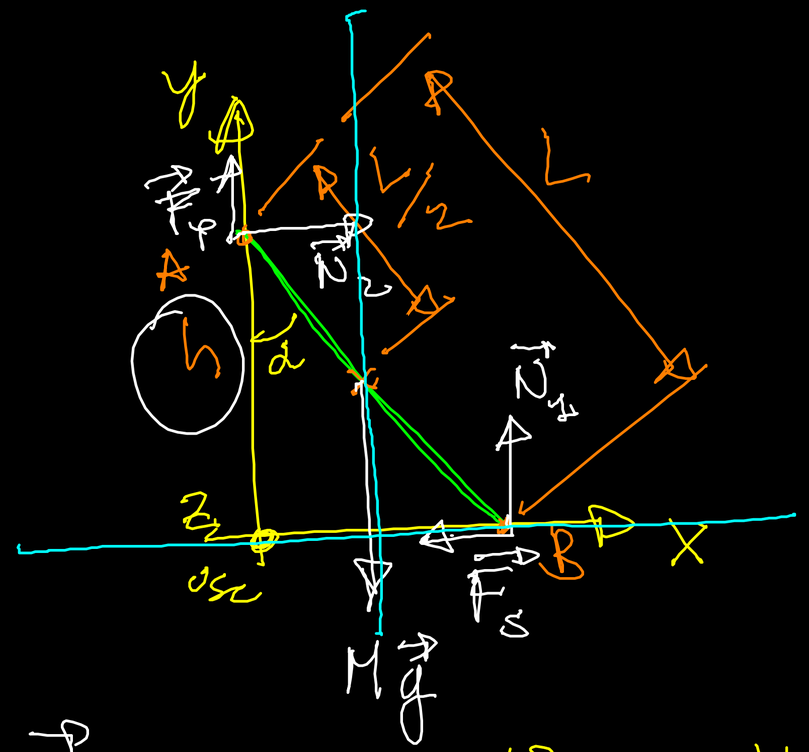
$$d^2 + h^2 = L^2$$

$$d = \sqrt{L^2 - h^2}$$

$$\sin\alpha = \frac{d}{L} = \frac{\sqrt{L^2 - h^2}}{L}$$

$$\frac{L}{2} Mg \sin\alpha + L \sin\alpha N_1 - h F_s = 0$$

$F_s \le \mu_s N_1$



$$\sum \vec{F}_{ext} = 0$$

$$N_2 - F_s = 0$$

$$F_p + N_1 - Mg = 0$$

$$\sum \vec{\tau}_{ext,O} = 0$$

$$\sum \left(\vec{\tau}_{ext,A}\right)_z = 0$$

$$|\vec{\tau}| = r_\perp |\vec{F}|$$

$$\oplus \begin{cases} \frac{L}{2} Mg \sin\alpha & \text{Peso} \\ (L \sin 2) N_1 & \text{Reaz. Normale} \\ h F_s & \text{attrito} \end{cases} = 0$$

$$|\vec{F}_s| \le \mu_s N_1$$

$$|\vec{F}_p| \le \mu_p N_2$$