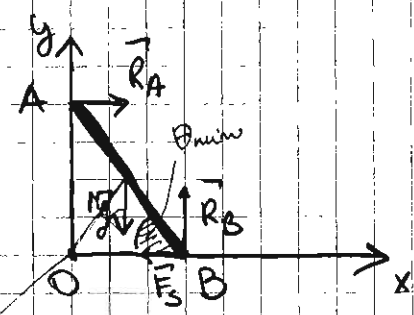


Esercizio della scala

θ_{min} t.c. scale non cade?



1) $\sum \vec{F}^E = 0 \rightarrow$

2) $\sum \vec{M}_O^E = 0$

$$\vec{R}_A + \vec{R}_B + Mg + \vec{F}_S = 0$$

$$\begin{cases} R_A - F_S = 0 \\ -Mg + R_B = 0 \end{cases} \rightarrow \begin{cases} F_S = R_A \\ R_B = Mg \end{cases}$$

$$- R_A \sin \theta + R_B \cos \theta - Mg \frac{l}{2} \sin \left(\frac{\pi}{2} - \theta \right) = 0$$

$$- \frac{1}{2} Mg \cos \theta + R_B \cos \theta - R_A \sin \theta = 0$$

$$- \frac{1}{2} Mg \cos \theta + \frac{1}{2} Mg \cos \theta - F_S \sin \theta = 0$$

$$F_S = \frac{1}{2} Mg \frac{1}{\tan \theta} \leq \mu_s R_B = \mu_s Mg$$

$$\Rightarrow \frac{1}{2} \frac{1}{\tan \theta} \leq \mu_s \quad \tan \theta \geq \frac{1}{2\mu_s}$$

$$\Rightarrow \tan \theta_{min} = \frac{1}{2\mu_s}$$

Assai più facile se mu 0 si sceglieva

