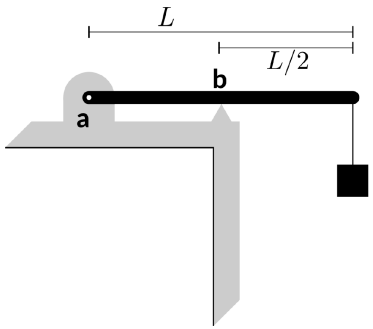
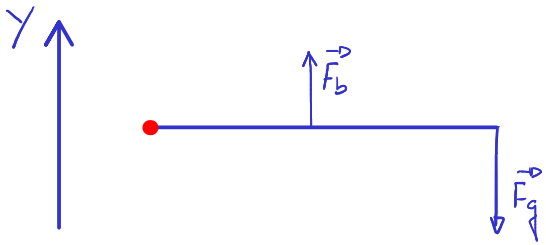
**Palanca**

En la figura, la barra puede rotar entorno al eje en **a**, calcula el torque o momento de la fuerza en **b** así como el valor de la fuerza. La masa suspendida es de 1 kg y L es 1 m.




## Datos

$m = 1\,Kg$

$L = 1\,m$

$\tau_b$ ?

$F_b$ ?

$F_g = -mg$

## Ecuaciones

$\sum_i \tau_i = 0$

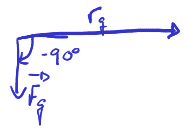
$|\vec{\tau}| = |\vec{r} \times \vec{F}| = r F \sin\alpha$

## Resolución

$\tau_g + \tau_b = 0 \qquad \tau_b = -\tau_g$

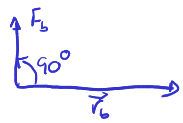
$\tau_g = L\,mg\,(-1)$

$= -Lmg$




$\tau_b = Lmg = 9'8\ Nm$ //

$\tau_b = \frac{L}{2} F_b$




$F_b = \frac{2}{L} \tau_b = 2mg = 19'6\ N$ //