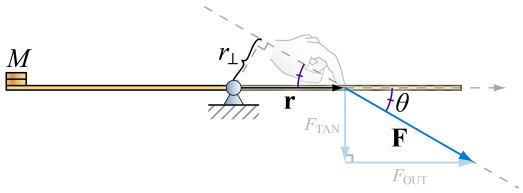
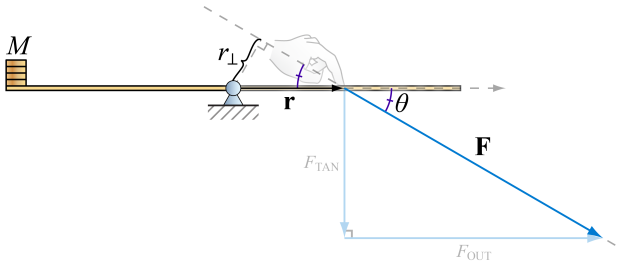
Rotational statics (for courses that do τ before N2L for rotation)

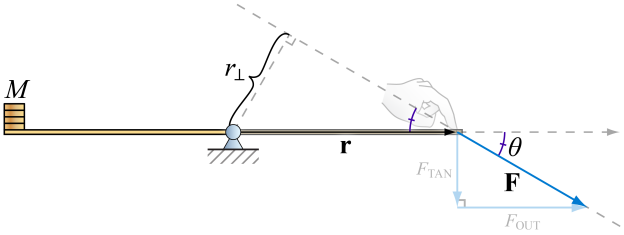
How can I prevent the lopsidedly-weighted seesaw from spinning about the frictionless pivot?



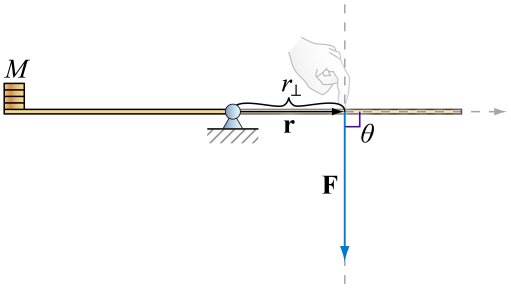
Twist $\neq 0$



$\uparrow F \Rightarrow \uparrow$ Twist



$\uparrow r \Rightarrow \uparrow$ Twist



$\uparrow\perp$ ity $\Rightarrow \uparrow$ Twist

$$|\tau_{\mathrm{F}}| := r_\perp F$$
$$:= (r \sin\theta) F$$

Rotational equilibrium

$\Rightarrow$

$$\sum_{\mathrm{CCW}} |\tau| = \sum_{\mathrm{CW}} |\tau|$$