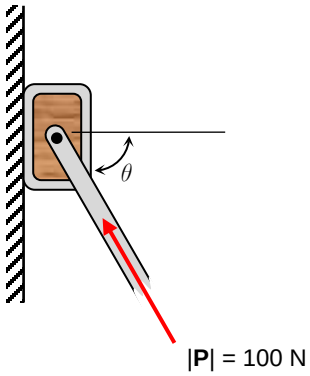
Example

A 7.5-kg mass is subject to a force **P** as shown in the figure. The coefficients of static and kinetic friction between the mass and the wall are $\mu_s = 0.45$ and $\mu_k = 0.35$, respectively. Find the range of angles for θ for which the mass is in equilibrium.



Example

The coefficients of static and kinetic friction between all surfaces in the figure are $\mu_s = 0.40$ and $\mu_k = 0.35$, respectively.

(a) Find the smallest force P that is required to move the 30-kg block.
(b) Repeat (a) if the cable is removed.
(c) What if the friction force between the blocks for part (b)?