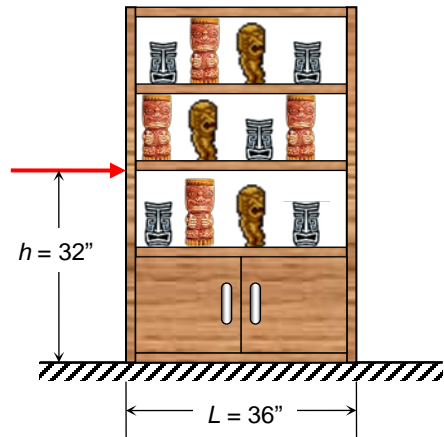## Example

Sid Gupta's legendary Tiki mug collection is displayed in a cabinet with a total weight of W_{cab} = 120 lb. A force P is applied to the cabinet at a height of h = 32 in as shown in the figure. If the coefficient of static friction between the cabinet and the floor is μ_s = 0.30,

(a) find the minimum force P that results in the cabinet moving.
(b) Repeat (a) if shag carpet is placed under the cabinet, increasing the value of μ_s to 0.60.

Example

The coefficients of static and kinetic friction between the rotating drum and the clamps in the figure are $\mu_s = 0.40$ and $\mu_k = 0.30$. The tension in the cable holding the clamps together is $T = 3$ kN. Find the moment M that must be applied to the drum to keep it rotating clockwise at a constant speed.