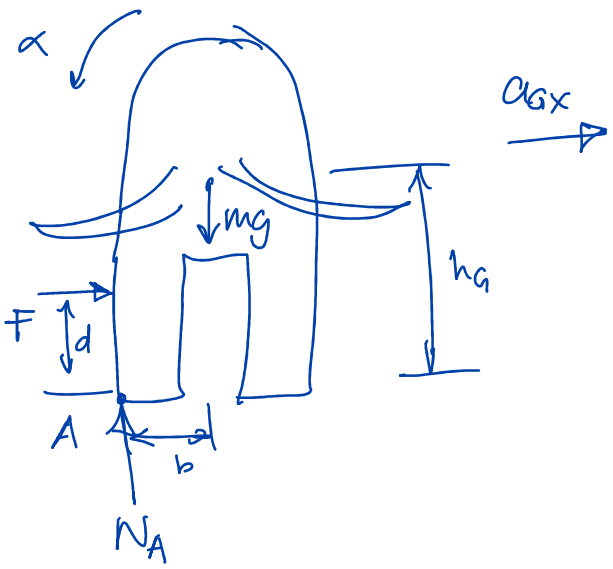
SOLUTION



Just at edge of tipping:
- normal force @ A
- $\alpha = 0$, $a_{Gy} = 0$

$\Sigma F_x: F = m a_{Gx}$

$\Sigma F_y: N_A - mg = 0$

$\Sigma M_A: -F \cdot d - mgb = -m a_{Gx} h_G$

$\Sigma M_A \Rightarrow +Fd + mgb = +F h_G$

$F(h_G - d) = mgb$

$$F = \frac{mgb}{(h_G - d)} = \frac{(6000\,kg)(9.81\,m/s^2)(0.8\,m)}{(0.55(3.75) - 1.2)}$$

$$= \underline{54594\,N}$$

(b) In danger of being crushed? NO (eqn: $F \leq 400$ = yes, $F > 400$ = no)

(c) $F = m a_{Gx}$

$$a_{Gx} = \frac{F}{m} = \frac{400\,N}{6000\,kg} = \underline{0.067\,m/s^2}$$