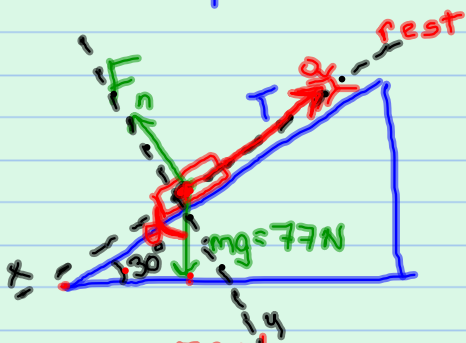


still Ch4

ex 4.2 p 94



$m \cdot g = 77 \text{ N}$
 ($\text{kg} \cdot \frac{\text{m}}{\text{s}^2} = \text{Newton}$)

find T and F_n

$\sum F_x = +T - 77 \cos 60 = m a^{\text{rest } 0}$
 $T = 77 \cos 60 = \underline{38.5 \text{ N}}$

$\sum F_y = F_n - 77 \sin 60 = m a^{\text{rest } 0}$
 $F_n = 77 \sin 60 = \underline{66.7 \text{ N}}$

$F = ma$

Newton's 2nd Law

when all of F are balanced

- static equilibrium

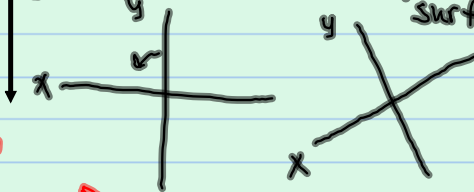
$\sum F = ma = 0$

① Free Body Diagram (FBD)

weight = $m \cdot g$ (straight down to center of earth)

$F_n \rightarrow$ normal (\perp) perpendicular from surface up on the object

② Rotate axis so x - parallel to surface



③ Write + sum x + y components