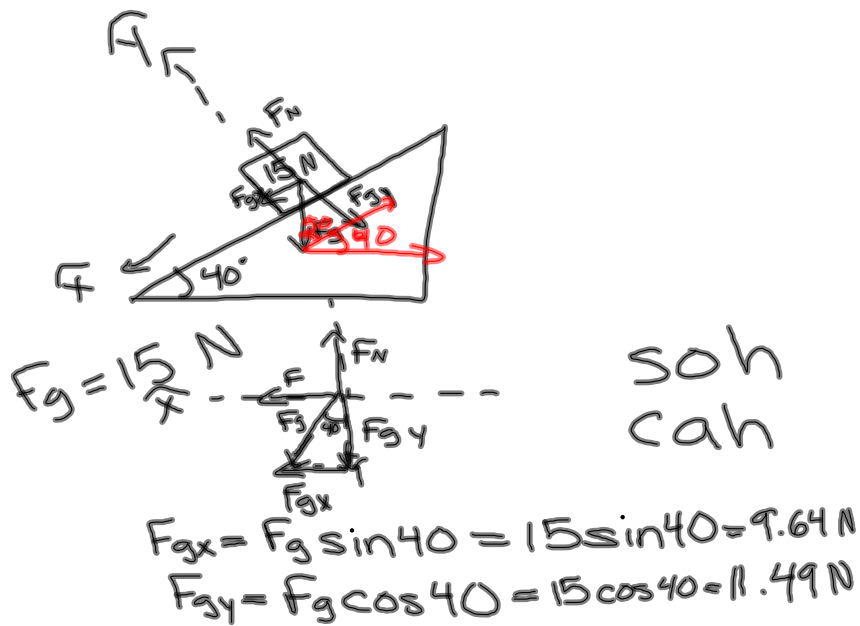


Normal force

→ perpendicular to
Surface

→ counter acts the
force due to gravity



soh
cah

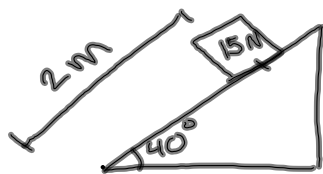
$F_{gx} = 9.64 \text{ N} \hat{x}$
 $F_{gy} = -11.49 \text{ N} \hat{y}$
 $F_N = 11.49 \text{ N} \hat{y}$

What is the acceleration?

$F_{net} = ma \quad F_g = 15 \text{ N}$

F_{net} is only in \hat{x} $m = \frac{15}{9.8}$
 $F_{net} = 9.64 \text{ N}$ $m = 1.53 \text{ kg}$

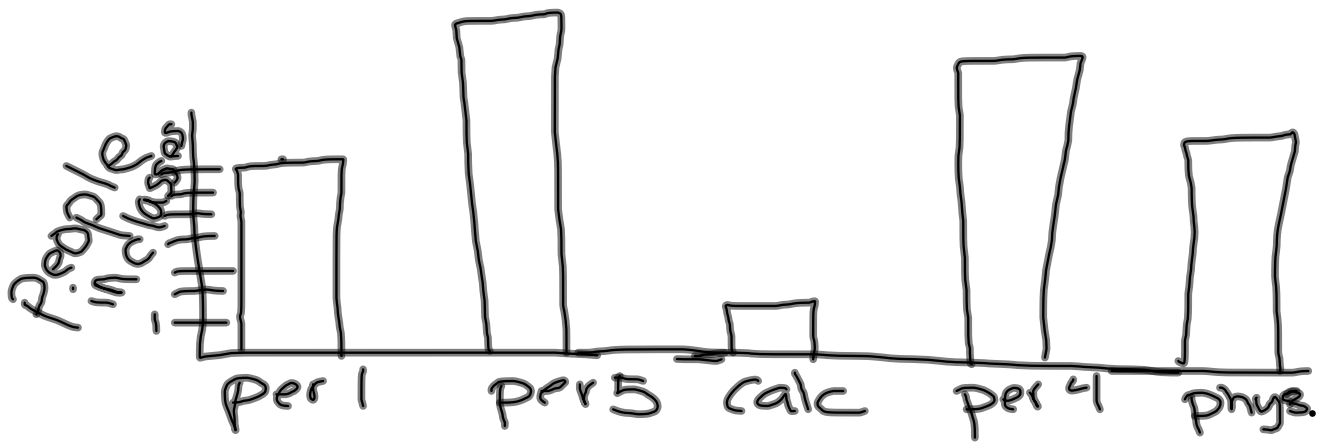
$9.64 = 1.53 a$
 $a = 6.30 \text{ m/s}^2 \hat{x}$



$a = 6.3 \text{ m/s}^2$
 $v_i = 0 \text{ m/s}$
 $\Delta x = 2 \text{ m}$

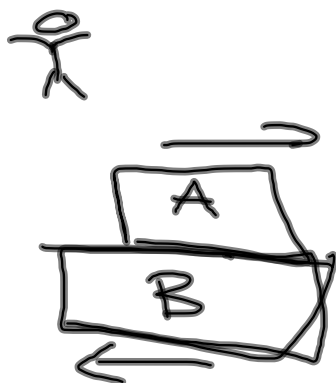
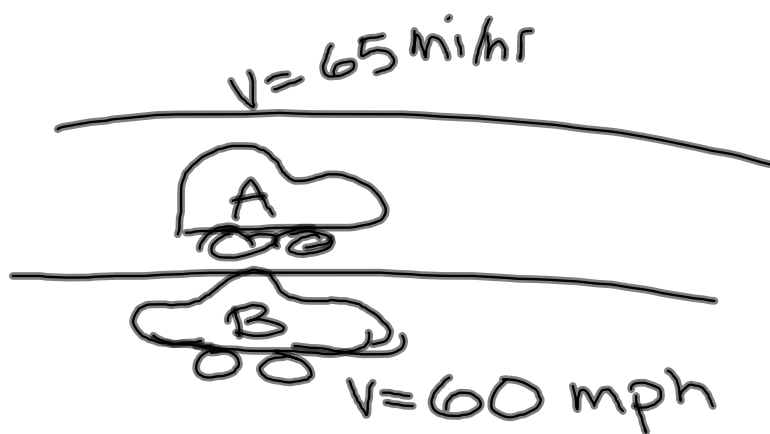
$v_f^2 = v_i^2 + 2a\Delta x$
 $v_f^2 = 2(6.3)(2)$

$v_f^2 = 25.2$
 $v_f = 5.02 \text{ m/s}$



Friction

- causes heat
- things rub against each other
- slows things down



7.

