

TEST CORRECTIONS

2. $F \rightarrow M \rightarrow a$

$F \rightarrow 2M \rightarrow ? \frac{a}{2}$

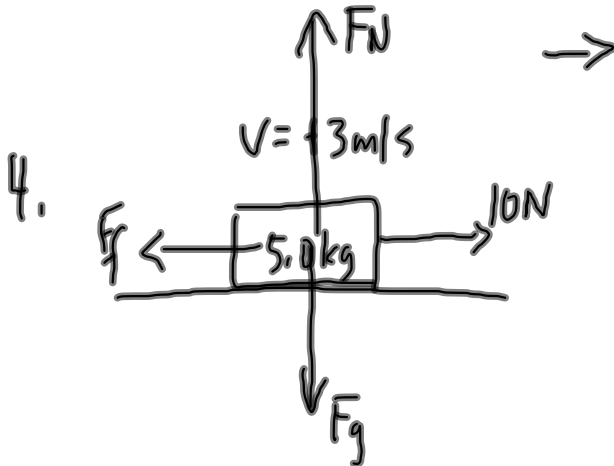
double the mass
half the acc

$$F = ma$$

$$a = \frac{F}{m}$$

$a \propto \frac{1}{m}$

inverse
proportionality

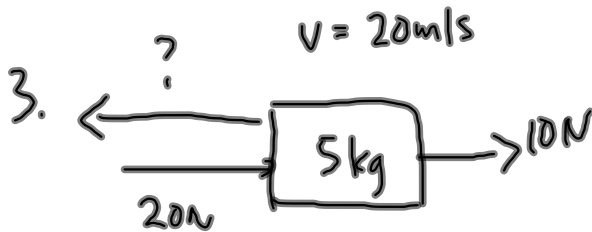


$$F_N = F_g$$

$$F_N = mg$$

$$F_N = (5.0 \text{ kg})(9.8 \text{ m/s}^2)$$

$$F_N = 49 \text{ N}$$



Part B

1. $\bar{F}_g = mg$

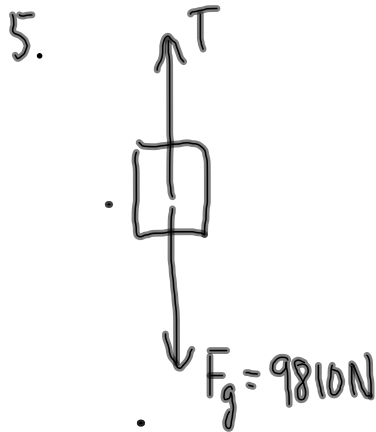
2. a) $F_f = \mu F_N$ + FBD

b) $F_{net} = ma$

c) $F_{net} = ma$

3. $a = \frac{\Delta v}{\Delta t}$ and $F_{net} = ma$

4. $v_2^2 = v_1^2 + 2ad$ and $F_{net} = ma$
↑ find a



a) $\vec{F}_{net} = m\vec{a}$

FBD!!

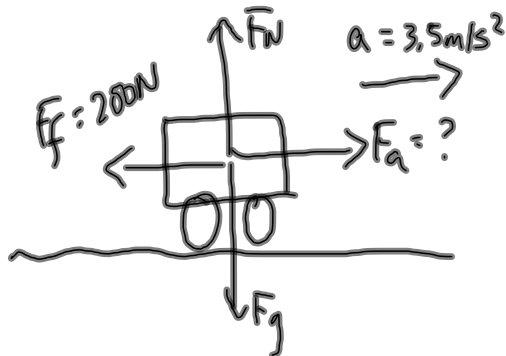
$T - F_g = ma$

$T - 9810N = (1000kg)(3m/s^2)$

$T - 9810N = 3000N$

$T = 12810N$

6. $F_f = 200N$
 $a = 3.5m/s^2$



$\vec{F}_{net} = m\vec{a}$

$F_a - F_f = ma$

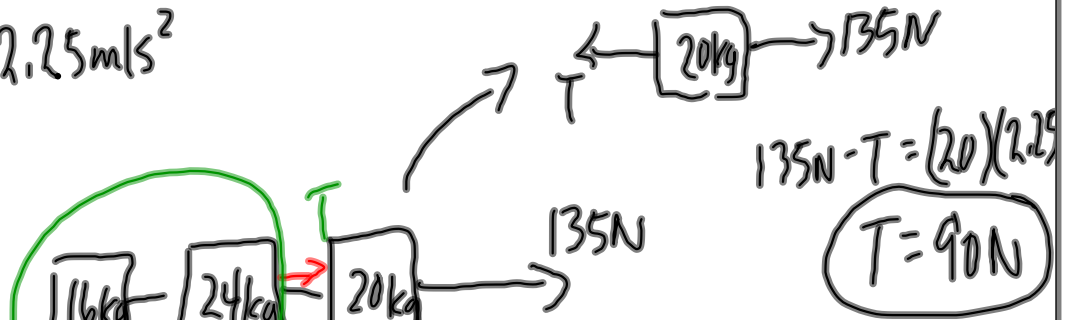
$F_a - 200N = (50kg)(3.5m/s^2)$

$F_a - 200N = 175N$

$F_a = 375N$

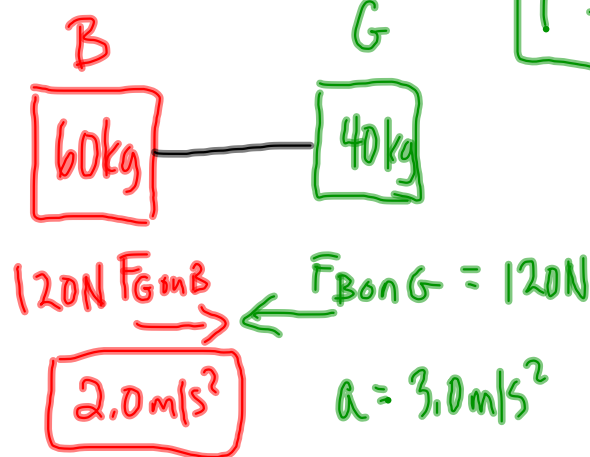
7. a) 2.25 m/s^2

b)



40 kg
 $@ 2.25 \text{ m/s}^2 \Rightarrow \vec{F}_{\text{net}} = m\vec{a}$
 $T = (40 \text{ kg})(2.25 \text{ m/s}^2)$
 $T = 90 \text{ N}$

8.



9. $F_{\Delta t} = m \Delta v$
 $\uparrow v_2 - v_1$