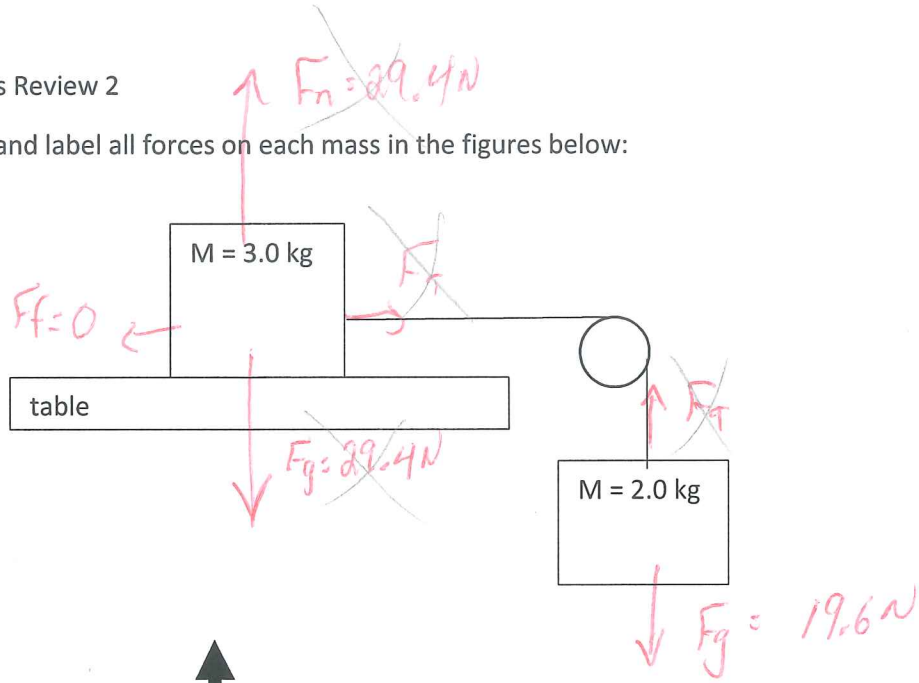


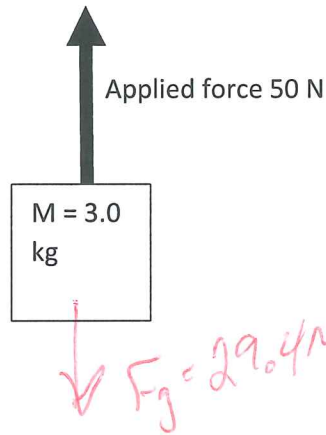
Newton's Laws Review 2

1) Draw and label all forces on each mass in the figures below:

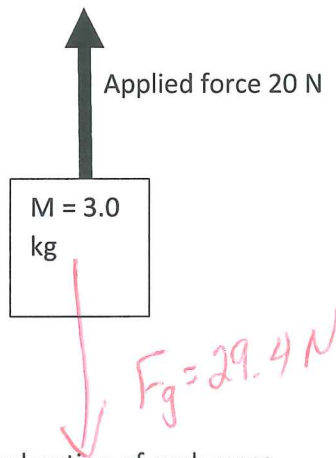
a)



b)



c)



2) Calculate the acceleration of each mass.

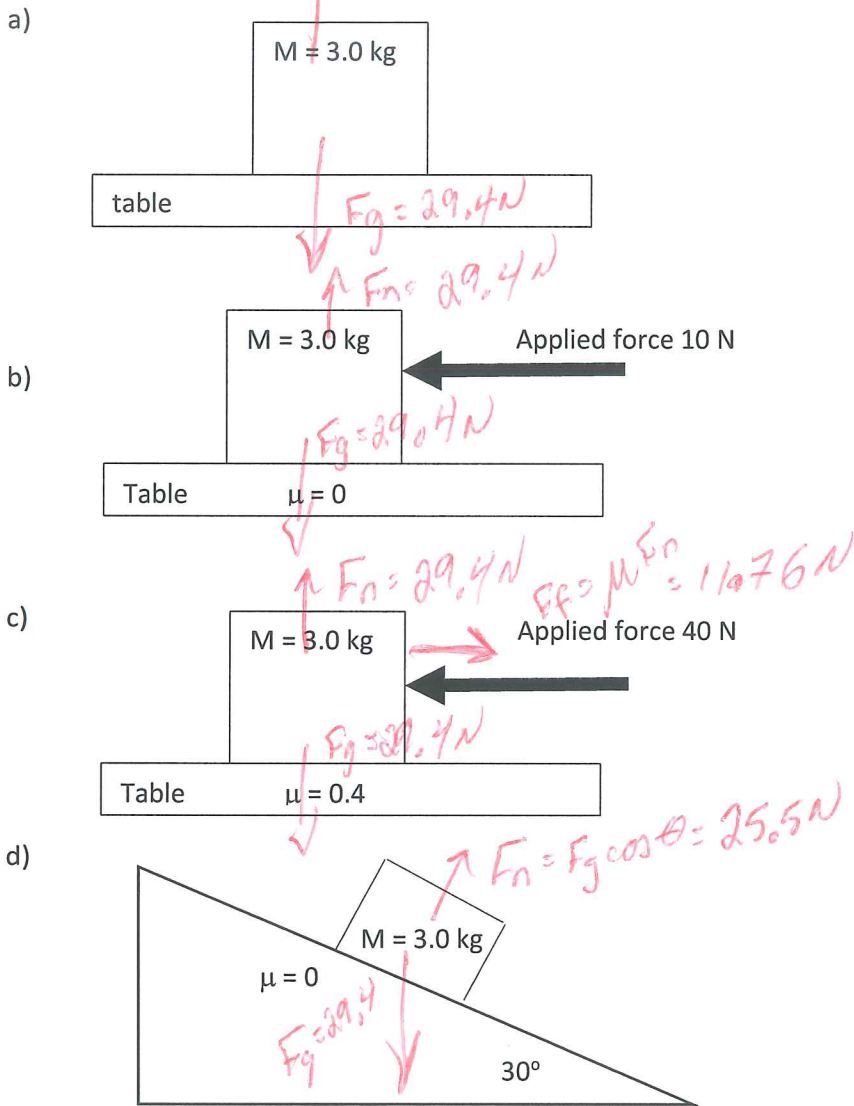
$$a) \frac{F_{net}}{m} = \frac{F_g}{m} = \frac{19.6}{3} = 3.92 \frac{m}{s^2}$$

$$b) \frac{F_{net}}{m} = \frac{F_{app} - F_g}{m} = \frac{20.6}{3} = 6.9 \frac{m}{s^2}$$

$$c) \frac{F_{net}}{m} = \frac{29.4 - F_{app}}{m} = \frac{9.4}{3} = 3.1 \frac{m}{s^2}$$

Newton's Laws Review

1) Draw and label all forces on each mass in the figures below:



2) Calculate the acceleration of each mass.

a) $F_{net} = 0$ so $a = 0$

b) $\frac{F_{net}}{m} = \frac{10}{3}$, $a = 3.3 \frac{m}{s^2}$

c) $F_{net} = F_{app} - F_f$
 $= 40 - 11.76 = \frac{28.24}{3} = 9.4 \frac{m}{s^2}$

d) $F_{net} = m g \sin \theta = \frac{14.7}{3} = 4.9 \frac{m}{s^2}$

3) Calculate the acceleration of the system at right

$F_{net} = F_{app} - F_{f1} - F_{f2}$
 $= 30 - 14.7 - 9.8 = 5.5\text{ N}$
 $\frac{F_{net}}{10} = 0.55 \frac{m}{s^2}$

