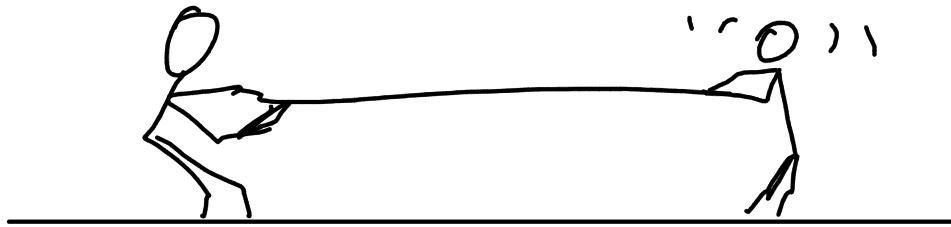


CP OCT 17  
~~100 lbs~~

90 lbs



$$\begin{aligned}
 F_{\text{net}} &= \\
 &= -100 \text{ lbs} + 90 \text{ lbs} \\
 &= -10 \text{ lbs}
 \end{aligned}$$



$$F_{\text{net}} = 50 \text{ N} - 40 \text{ N} = 10 \text{ N}$$

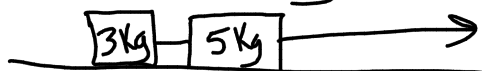
$$m_{\text{sys}} = 5 \text{ kg}$$

$$F_{\text{net}} = m_{\text{sys}} a$$

$$\frac{F_{\text{net}}}{m_{\text{sys}}} = a = \frac{10 \text{ N}}{5 \text{ kg}} = \boxed{2 \frac{\text{m}}{\text{s}^2} \text{ Rt}}$$

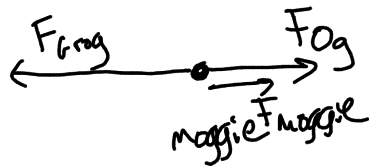
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$$m_{\text{sys}} = 8 \text{ kg}$$



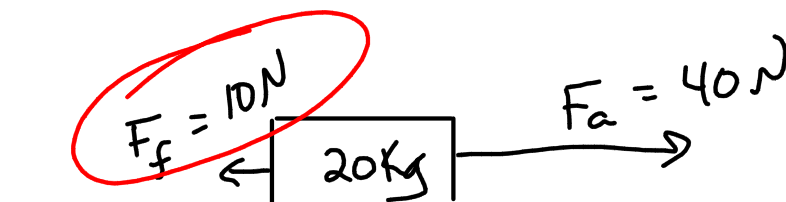
. A tug of war breaks out among cave men. Two guys are tugging on a woman, Moggie. Og is pulling with a force of 600 N right and Grog is pulling the other way with a force of 800 N. However, Moggie prefers Og since his brow ridge is less pronounced and she secretly applies a force of 250 N towards Og. What is the resultant force?

$$\begin{aligned}
 1. \quad & F_{og} = 600\text{N Rt} \\
 & F_{grog} = 800\text{N L} \\
 & F_{moggie} = 250\text{N Rt.}
 \end{aligned}$$



- Don't know what to do?
1. write out the facts
  2. Draw a diagram, if possible
  3. Write down any equations that might fit.

$$\begin{aligned}
 F_{net} &= F_1 + F_2 + F_3 \\
 &= 600\text{N} + 250\text{N} - 800\text{N} \\
 &= 50\text{N Rt.}
 \end{aligned}$$



what is the motion of the box?

$$\frac{30\text{N}}{20\text{kg}} = 1.5 \frac{\text{m}}{\text{s}^2} \text{ Rt}$$

$$\frac{30\text{N}}{20\text{Kg}} = \frac{30\cancel{\text{Kg}} \frac{\text{m}}{\text{s}^2}}{20\cancel{\text{Kg}}} \left( \frac{1\text{N}}{1\text{Kg} \frac{\text{m}}{\text{s}^2}} \right)$$

$$1.5 \frac{\text{m}}{\text{s}^2}$$

- What is Friction?
- examples of friction
- Friction between feet/ground
  - lighting a match
  - Head on Box
  - sandpaper and anything
  - Tug of war Grip on rope + floor
  - steering wheel (hands on)
  - Picking stuff up

What affects Friction?  
Possibilities...

- lotion, oil, water, blood  
(Decrease Friction)  
called lubricants
- change from sliding friction  
to rolling friction
- How to make more friction
  - a) add pressure
  - b) change texture to  
be rougher
  - c)