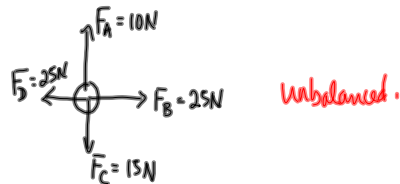
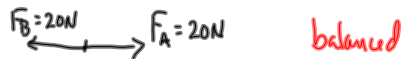
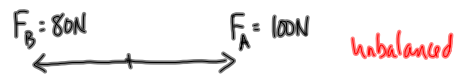


2.2 Forces + Dynamics

Dynamics - based on Newton's 3 laws.

What is an unbalanced force?



Weight -



the force of gravity on an object
 or
 the gravitational pull on an object.

- measured in Newtons
- depends on mass

Inertial mass

Gravitational mass

$$\vec{W} = m\vec{g}$$

where \vec{W} is the weight (force of gravity) (N)

m is the mass (kg)

\vec{g} is 9.81 N kg^{-1} (near the Earth's surface)

* \vec{g} varies depending on location

Chris weighs 700N

$$W = mg$$

$$m = \frac{W}{g}$$

$$m = \frac{700\text{N}}{9.81 \text{ N kg}^{-1}}$$

$$m = 71.4 \text{ kg} \quad (157 \text{ lb})$$