

Forces:

- Push/Pull
- Gravity
- Lift
- Momentum (?)
- acceleration and speed
- Net force
- Newtons
- Centripetal
- Internuclear
 - Strong
 - Weak
 - Electromagnetic
(also outside nucleus)

NET FORCE

- Total force in a given direction $\rightarrow$ x-direction, y-direction, parallel, perpendicular

- Mathematically

$$F_{\text{net}} = F_1 + F_2 + F_3 + \dots$$

- Choose coordinate system and define $+/-$

Worksheet 1a

1)

$$F_{\text{net}-y} = \emptyset$$

↑ +

 $F_{\text{Normal, on cat, by floor}}$
 $F_g, \text{ on cat, by earth}$

2)

 $F_N, \text{ on skater, by ice}$
 $F_g, \text{ on skater, by earth}$

3)

$$F_{\text{net}-x} \leftarrow$$

 $F_{\text{friction, on player, by ground}}$
 $F_N, \text{ on player, by ground}$

$$F_{\text{net}-y} = \emptyset$$

 $F_g, \text{ on player, by earth}$