

FORCE - PUSH OR PULL

$F = \text{FORCE}$

$m = \text{MASS}$

$a = \text{ACCELERATION}$

* $F = m \cdot a$

* MEASURED IN NEWTONS (N)

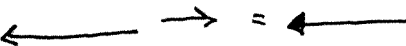
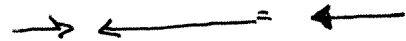
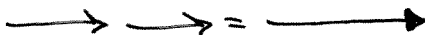
* $1 \text{ N} = 1 \text{ kg} \cdot \text{m} / \text{s}^2$

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

COMBINING FORCES TO FIND NET (OVERALL) FORCE

UNBALANCED:

* OBJECTS ACCELERATE



BALANCED:

* EQUAL ! OPPOSITE DIRECTION
* NO MOTION



FRICTION: ANY FORCE THAT OPPOSES MOTION

4 TYPES:

- STATIC FRICTION - FORCE THAT ACTS ON OBJECTS THAT AREN'T MOVING
- SLIDING FRICTION - FORCE THAT ACTS ON OBJECTS AS IT SLIDES OVER A SURFACE
- ROLLING FRICTION - FORCE THAT ACTS ON ROLLING OBJECTS
- FLUID FRICTION - OPPOSES THE MOTION OF AN OBJECT THROUGH A LIQUID