

# Force Intro Notes Week 24

## Tuesday

# Forces against forces

**C-notes**

**A force is a push or pull**  
**Forces have**  
**magnitude/intensity (the size of**  
**the force)**

**Forces have a direction**



# Forces against forces

**The intensity of a force is measured in a unit called a Newtons.**

**The direction of a force can be indicated as left, right, up, down, north, south, etc.**

**To show the intensity and direction we use an arrow called a VECTOR.**

# Forces against forces

**Vector:**

To show the intensity, you draw an arrow. The length of the arrow shows the intensity:

**Example:**



The shorter arrow shows less intensity

**The tip shows the direction...**

## Forces against forces

**Forces always work in PAIRS**

- Depending on the direction or intensity three things can happen:

**No movement**

**Movement in a direction or a change of speed**

**Steady speed and direction**

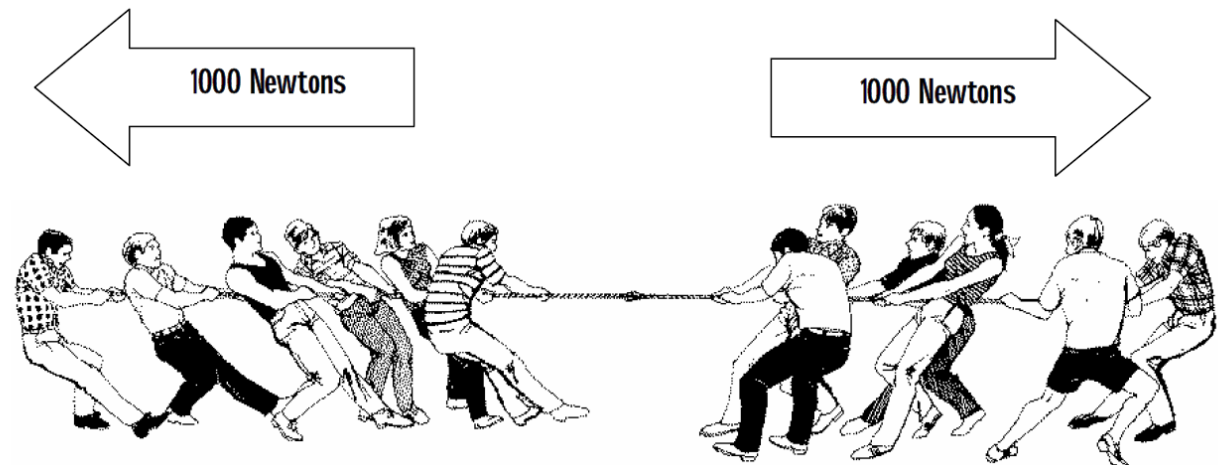
**Steady change in speed**



# Forces against forces

Forces can be “balanced”

- NO MOVEMENT
- Magnitude/intensity are equal
- **Direction is opposite**

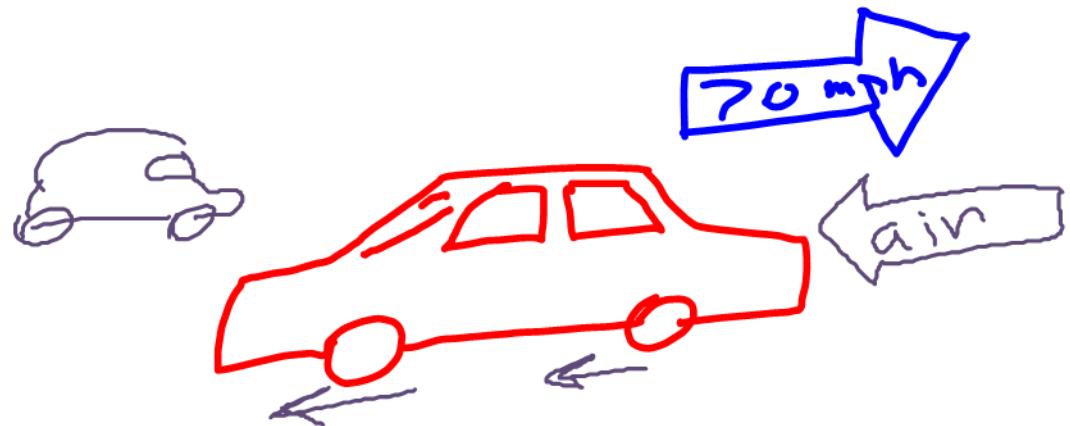


# Forces against forces

C-notes

Forces can be “balanced”

- **CONSTANT SPEED**
- **Magnitude/intensity stays the same**
- **Direction is opposite**



# Forces against forces

C-notes

## Forces can be “unbalanced”

- Force and/or Direction is different
- Results: a) you have a change in speed; b) you have a change in direction or c) both

