

# Chapter 5

## Matter in Motion



### Section 2 – What Is a Force?

# Force

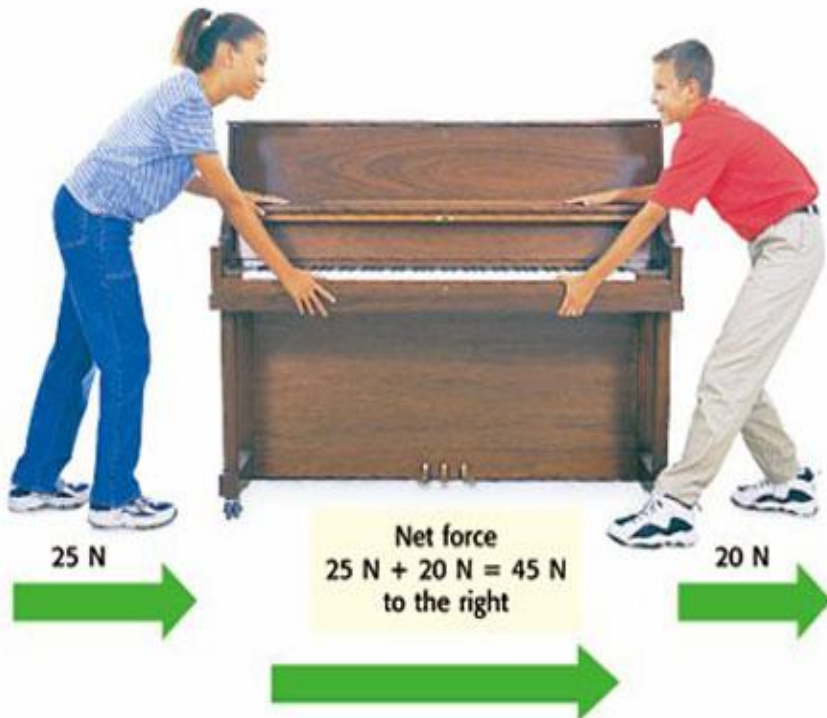
- A force is a push or a pull
- Forces act on objects
- Net force – combination of all forces acting on an object
- Newton (N) – the SI unit for force



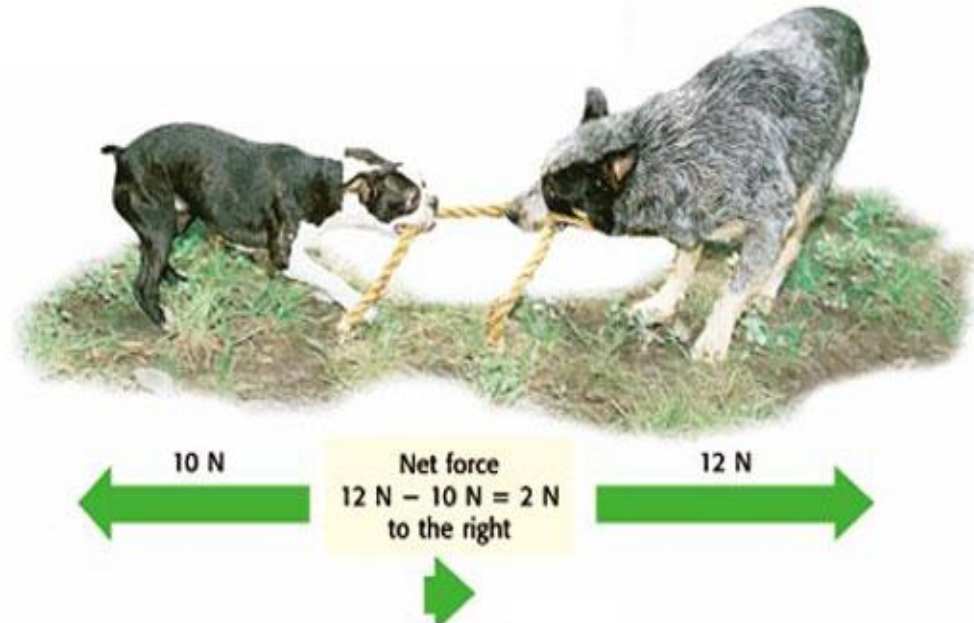
# Net Force

- If forces are applied in the same direction, add
- If forces are applied in different directions, subtract

## Forces in the Same Direction

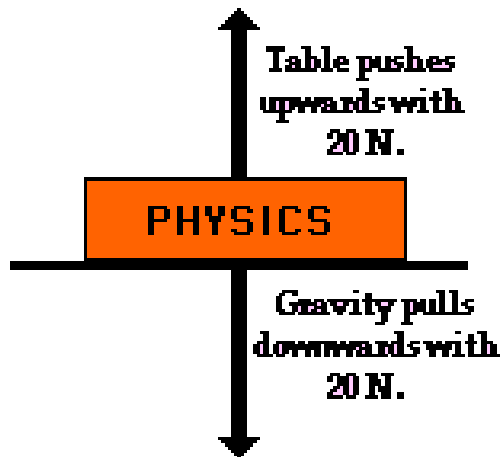


## Forces in Opposite Directions



# Balanced Forces

- Forces with a net force of 0 N
- Do not cause a change in motion of a moving object
- Do not make an unmoving object start moving



The forces on the person are balanced.



# Unbalanced Forces

- Have a net force that is NOT 0 N
- Causes a change in motion
  - Change in speed or direction
  - Make an unmoving object move
  - [example](#)

