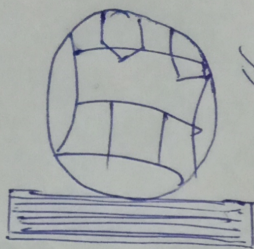


# NEWTON'S LAWS OF MOTION

## (1) Newton's First Law (Law of Inertia)

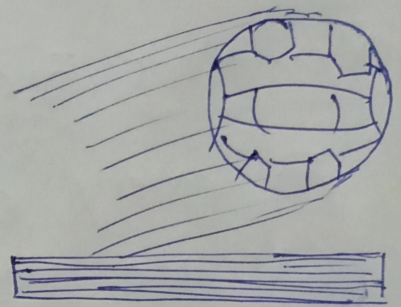
Everybody continues to be in state of rest or in uniform motion in a straight line until no external force is applied on the body.



An object at rest will remain at rest....

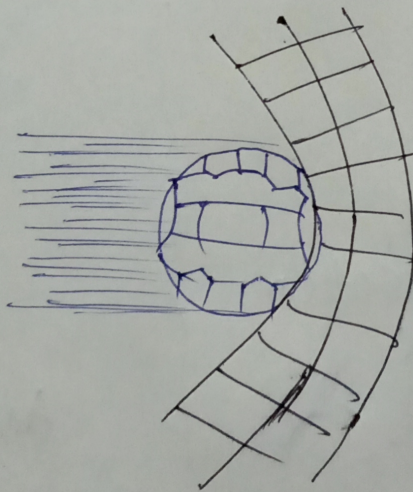


Unless acted on by an unbalanced force



An object in motion will continue with constant speed & direction....

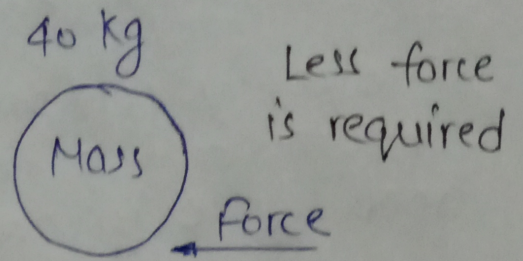
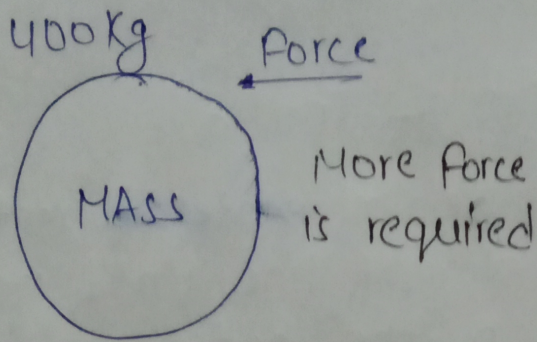
... Unless acted on by an unbalanced force.



## (2) Newton's 2nd Law

The second Law of motion states that acceleration is produced when an unbalanced force acts on an object (mass). The more mass the object has the more net force has to be used to move it.

$$F = ma \text{ (Force = mass} \times \text{acceleration)}$$



### 3) Newton's 3rd Law

To every action there is an equal and opposite reaction.

