

## Answer on Question 49937, Physics, Mechanics | Kinematics | Dynamics

### Question:

What is the Newton`s First Law of Motion?

### Answer:

According to the Newton`s First Law of Motion the net force acting on the object is zero, therefore the velocity of the object is constant. We can write the Newton`s First Law of Motion mathematically:

$$\sum F = 0, \frac{dv}{dt} = 0.$$

There are two consequences from the Newton`s First Law of Motion:

- a) An object that is at rest will stay at rest unless an external force acts upon it.
- b) An object that is in motion will not change its velocity unless an external force acts upon it.