

## Newton's Three Laws of Motion:

1. The Principle of Inertia: A body in a state of rest or uniform rectilinear motion continues indefinitely in that state unless acted upon by an external force.

2. The Force Law:

$$F = ma$$

3. The Principle of Equal and Opposite Reactions: For every action there exists an equal and opposite reaction.

## The Law of Universal Gravitation:

$$F_{12} = G \frac{m_1 m_2}{r_{12}^2}$$