Dean Gadberry

NCTC PHYS 2425

February 7, 2024

Chapter 4 Lecture

heading

---

subheading

Newton's Laws

1. Every object continues in its state of rest, or of uniform velocity in a straight line, as long as no net force acts on it.
2. The acceleration of an object is directly proportional to the net force acting on it, and is inversely proportional to the object's mass. The direction of the acceleration is in the direction of the net force acting on the object.

$$\Sigma \vec{F} = m\vec{a}$$

3. Whenever one object exerts force on a second object, the second object exerts an equal force in the opposite direction on the first object.

$$acceleration = \frac{Force}{mass} \implies a = \frac{F}{m} \implies N = \frac{1kg \times m}{s^2}$$