Name _____

Why Do Objects of Different Masses Fall at the Same Rate in a Vacuum?

Multiple Choice Questions

1. Why do objects fall at the same rate in a vacuum?

a) Because there is no gravity in a vacuum

b) Because air resistance is stronger in a vacuum

c) Because gravity affects all objects equally

d) Because objects in a vacuum are weightless

2. Who conducted the famous experiment with objects of different masses at the Leaning Tower of Pisa?

a) Sir Isaac Newton

b) Albert Einstein

c) Galileo Galilei

d) Johannes Kepler

3. What is the approximate acceleration due to gravity near the surface of the Earth?

a) 1 meter per second squared (m/s^2)

b) 5 meters per second squared (m/s^2)

c) 9.8 meters per second squared (m/s^2)

d) 20 meters per second squared (m/s^2)

4. Why do heavier objects experience a stronger gravitational force?

a) Because they have less mass

b) Because gravity doesn't affect heavy objects

c) Because their acceleration is weaker

d) Because their mass is greater

5. In a vacuum, why do objects of different masses fall at the same rate?

a) Because they experience different gravitational forces

b) Because they have different shapes

c) Because they have different colors

d) Because gravity affects all objects equally