VideoPlato Academy

Mass and Weight

1. What is the difference between mass and weight?

.....

.....

.....

2. Define the term "gravitational field strength" and explain its significance in determining weight.

.....

.....

.....

3. On Earth, what is the approximate value of gravitational field strength, and what unit is it measured in?

.....

4. If an object has a mass of 5 kg, what is its weight on Earth?

.....

.....

.....

5. If a person has a weight of 600 N on Earth, what is their mass?

.....

.....

.....

VideoPlato
Academy

6. How does the weight of an object change when taken to a location where the gravitational field strength is greater than that of Earth?

.....

.....

.....

7. What is the weight of a 10 kg object on the surface of the Moon, where the gravitational field strength is approximately 1.6 N/kg?

.....

.....

.....

8. Calculate the mass of an object that weighs 150 N on Jupiter, where the gravitational field strength is approximately 24.8 N/kg.

.....

.....

.....

9. On Mars, the gravitational field strength is about 3.7 N/kg. If a person has a mass of 70 kg, what is their weight on Mars?

.....

.....

.....

10. How does weight differ from mass in terms of its dependence on location?

.....

.....

.....

11. If an object weighs 500 N on Saturn, where the gravitational field strength is about 10.4 N/kg, what is its mass?

.....

.....

.....

12. What effect does a decrease in gravitational field strength have on the weight of an object?

.....

.....

.....

13. If the gravitational field strength on a distant planet is 15 N/kg and an object has a mass of 8 kg, what is its weight?

.....

.....

.....

14. How does the weight of an object on the surface of the Earth compare to its weight on the surface of the Moon?

.....

.....

.....

15. If an object has a mass of 50 kg, calculate its weight on Venus, where the gravitational field strength is approximately 8.87 N/kg.

.....

.....

.....