

Question 1

An object of mass 1.0 kg is at rest on the Earth. An identical object is at rest on a planet with a gravitational field strength of twice that on the Earth.

Which row correctly compares the object on the planet to the object on the Earth?

	its weight	its acceleration when the same horizontal resultant force is applied
A	double	equal to that on the Earth
B	double	half that on the Earth
C	half	equal to that on the Earth
D	half	half that on the Earth

Question 2

A space probe that has a mass of 600 kg is on the planet Mars.

The acceleration of free fall on Mars is 4.0 m/s^2 .

What is the weight of the space probe on Mars?

A 60N

B 150N

C 2400 N

D 6000N

Question 3

Which measuring instrument is used to compare masses?

A balance

B protractor

C stop-watch

D voltmeter

Question 4

Which statement about mass is correct?

A A mass of 10 kg weighs 1 N near the Earth's surface.

B Mass is a gravitational force.

C Mass increases when the gravitational field strength increases.

D The greater the mass of a body, the more it resists a change in its motion.

Question 5

A solid is heated causing it to expand.

What effect does this have on its mass and on its density?

	mass	density
A	decreases	decreases
B	decreases	stays constant
C	stays constant	decreases
D	stays constant	stays constant

Question 6

An object of mass 1.0 kg is at rest on the Earth. An identical object is at rest on a planet with a gravitational field strength of twice that on the Earth.

Which row correctly compares the object on the planet to the object on the Earth?

	its weight	its acceleration when the same horizontal resultant force is applied
A	double	equal to that on the Earth
B	double	half that on the Earth
C	half	equal to that on the Earth
D	half	half that on the Earth

Question 7

Which property of an object is a consequence of the effect of a gravitational field acting on it?

- A** density
- B** mass
- C** volume
- D** weight

Question 8

A solid is heated causing it to expand.

Which effect does this have on its mass and on its density?

	mass	density
A	decreases	decreases
B	decreases	stays constant
C	stays constant	decreases
D	stays constant	stays constant