

Question 1

Which statement about gravitational field strength g is correct?

- A** $g = \frac{\text{mass}}{\text{weight}}$
- B** $g = \text{mass} \times \text{weight}$
- C** g is defined as the mass per unit force
- D** g is equal to the acceleration of free fall

Question 2

A stone is dropped from rest at a height of 2.0 m above the surface of a planet.

The planet has no atmosphere.

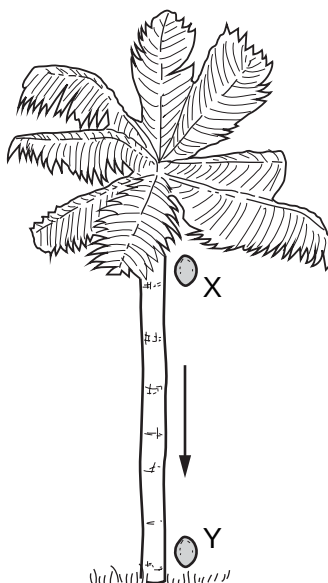
The speed of the stone just before reaching the surface of the planet is 3.8 m/s.

What is the acceleration of free fall on the planet?

- A** zero **B** 1.9 m/s^2 **C** 3.6 m/s^2 **D** 7.2 m/s^2

Question 3

A coconut falls from a palm tree. At X, it has just started falling. Y is the point just before it hits the ground.



What is the acceleration of the coconut at X?

(Air resistance can be ignored.)

- A zero
- B less than that at Y
- C the same as that at Y
- D more than that at Y

Question 4

A light ball is held at rest at the top of a tall cliff. It is released and falls through the air, eventually reaching its terminal velocity.

Which row describes the behaviour of the ball as it descends?

	the initial acceleration of the ball	the final acceleration of the ball
A	0	0
B	0	g
C	g	0
D	g	g

Question 5

A steel ball is dropped from the top floor of a building. Air resistance can be ignored.

Which statement describes the motion of the ball?

- A** The ball falls with constant acceleration.
- B** The ball falls with constant speed.
- C** The ball falls with decreasing speed.
- D** The ball falls with increasing acceleration.