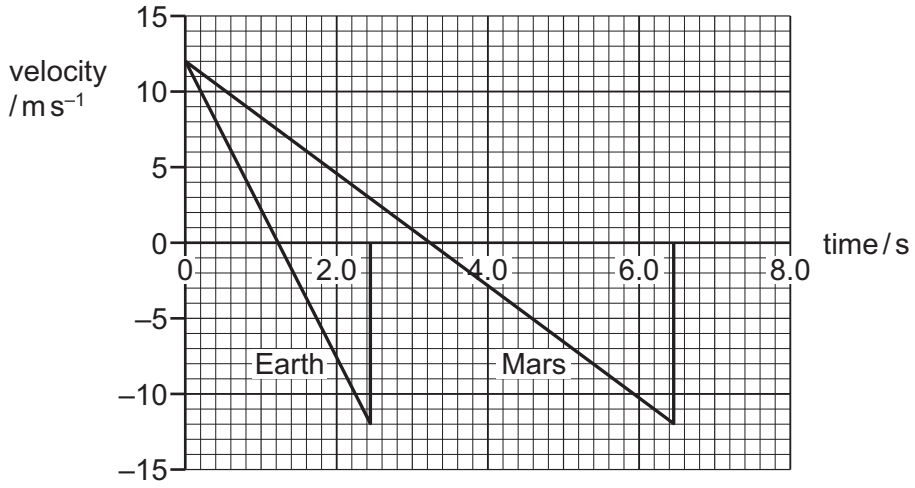
6 A rock is launched vertically upwards from the surface of the Earth and an identical rock is launched vertically upwards from the surface of Mars. Each rock is launched with an initial velocity of $12\,m\,s^{-1}$.

Each rock then reaches its maximum height above the surface before returning back down to the surface. The velocity–time graph for each rock is shown. In both cases, air resistance is negligible.



What is the difference in the maximum heights of the two rocks?

A 12 m **B** 15 m **C** 19 m **D** 24 m

7 Which statement describes the mass of an object?

A the force the object experiences due to gravity

B the momentum of the object before a collision

C the resistance of the object to changes in motion

D the weight of the object as measured by a balance