9 A spacecraft of mass m has weight W on the surface of the Earth. The Earth has radius R.

The spacecraft is launched perpendicularly from the surface of the Earth.

When the spacecraft has reached a distance R above the surface of the Earth, it has lost fuel and its mass is now $\frac{m}{2}$.

What is the weight of the spacecraft when it has reached a distance R above the surface of the Earth?

A $\frac{W}{8}$ **B** $\frac{W}{4}$ **C** $\frac{W}{2}$ **D** W