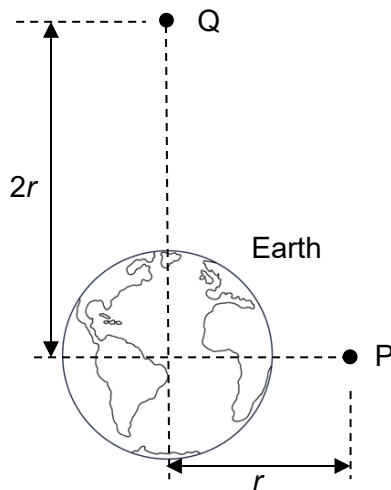**12** P and Q are two points above Earth's surface at distances r and $2r$ respectively from the centre of the Earth.

The gravitational potential at P is -800 kJ kg^{-1}. When a 1.00 kg mass is taken from Q to P, what is the work done on the mass?

A -400 kJ **B** -200 kJ **C** 400 kJ **D** 800 kJ