

8 A non-relativistic particle of mass m has momentum p and kinetic energy E_k .

A second non-relativistic particle of mass $\frac{m}{2}$ has momentum $2p$.

Which of the following expressions gives the kinetic energy of the second particle?

☐ **A** $\frac{E_k}{2}$

☐ **B** E_k

☐ **C** $2E_k$

☐ **D** $8E_k$

(Total for Question 8 = 1 mark)