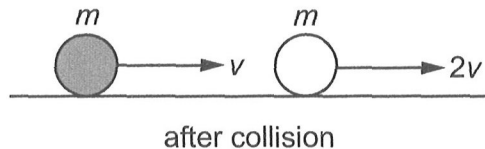
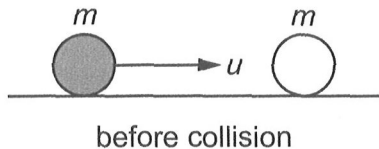


- 6 A particle of mass m travels freely along a smooth horizontal surface in a straight line with velocity u . It collides inelastically with a stationary particle also of mass m .



After the collision, the two particles move along the same line in the same direction with velocities v and $2v$.

What is the fraction of the initial kinetic energy that has been lost?

A $\frac{1}{3}$

B $\frac{4}{9}$

C $\frac{5}{9}$

D $\frac{2}{3}$

- 7 A wire is stretched by an increasing force. A graph of force against extension is shown