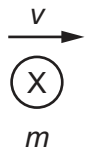
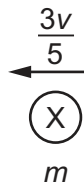


- 9 An elastic collision occurs between two bodies X and Y. The mass of body X is m and the mass of body Y is $4m$. Body X travels at speed v before the collision and speed $\frac{3v}{5}$ in the opposite direction after the collision. Body Y is stationary before the collision.



before



after

What is the kinetic energy of body Y after the collision?

A $\frac{8}{10}mv^2$

B $\frac{34}{50}mv^2$

C $\frac{16}{50}mv^2$

D $\frac{1}{5}mv^2$