6   An object of mass M travelling to the right with velocity $2v$ collides with another object of mass $2M$ travelling to the left with velocity v. After the collision, the objects stick together.

Which line in the table shows the total momentum and the total kinetic energy of the two objects after the collision?

	momentum	kinetic energy
A	0	0
B	$4Mv$	0
C	0	$3Mv^2$
D	$4Mv$	$3Mv^2$

7   A particle of mass m travelling with velocity u collides elastically and head-on with a stationary