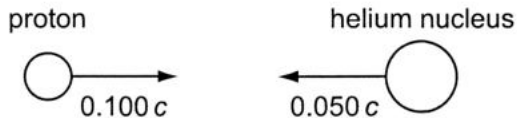


- 7 A proton (mass $1u$) travelling with velocity $+0.100\ c$ collides elastically head-on with a helium nucleus (mass $4u$) travelling with velocity $-0.050\ c$.



What are the velocities of each particle after the collision?

	proton	helium nucleus
A	$-0.140\ c$	$+0.010\ c$
B	$+0.140\ c$	$+0.010\ c$
C	$+0.233\ c$	$-0.083\ c$
D	$-0.233\ c$	$+0.083\ c$

- 8 A yacht that is in equilibrium has two vertical and two horizontal forces acting on it.