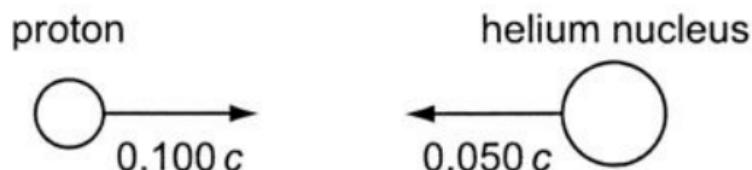


- 7 A proton (mass 1u) travelling with velocity  $+0.100 c$  collides elastically head-on with a helium nucleus (mass 4u) travelling with velocity  $-0.050 c$ .



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.