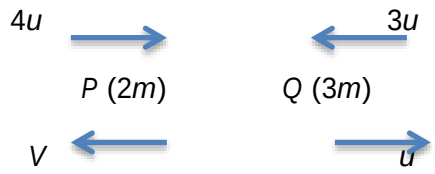
Question Number	Scheme	Marks
2(a)	 $8mu - 9mu = -2mV + 3mu$ $V = 2u$	M1 A1 A1 (3)
(b)	(Has been) reversed	B1 (1)
(c)	For Q: $I = 3m(u - -3u)$ $= 12mu$ OR: For P: $I = 2m(2u - -4u)$ $= 12mu$	M1 A1 A1 (3) **OR** M1 A1 A1 (3) **7**
	Notes	
(a)	M1 for CLM with correct no. of terms, all dimensionally correct, to give an equation in m, u and their V only. Condone consistent g's or cancelled m's. First A1 for a correct equation (they may have + $2mV$) Second A1 for $2u$ (must be positive since speed is required)	
(b)	B1 for '(has been) reversed'. Only available if a correct velocity has been correctly obtained in part (a). B0 for 'changed' ,'direction has changed' , 'yes'	
(c)	M1 for using Impulse = change in momentum of Q (must have $3m$ in both terms) (M0 if *clearly* adding momenta or if g is included) but condone sign errors. First A1 for $3m(u - -3u)$ or $-3m(u - -3u)$ Second A1 for $12mu$ (must be positive since magnitude required) **OR** M1 for using Impulse = change in momentum of P (must have $2m$ in both terms) (M0 if *clearly* adding momenta) but condone sign errors. First A1 for $2m(2u - -4u)$ or $-2m(2u - -4u)$ Second A1 for $12mu$ (must be positive since magnitude required) N.B. Allow use of $I = 3m(u - v)$ or $I = 2m(u - v)$ since only magnitude required	