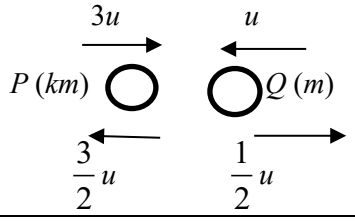
Question Number	Scheme	Marks
2(a)		
	CLM: $km\times 3u - mu = -km\times\frac{3}{2}u + m\times\frac{1}{2}u$	M1 A1 A1
	$k = \frac{1}{3}$	A1
		(4)
2(b)	$I = m\left(\frac{1}{2}u - -u\right)$ **OR** $I = \frac{1}{3}m\left(\frac{3}{2}u - -3u\right)$	M1 A1
	$I = \frac{3}{2}mu$ must be positive	A1
		(3)
		(7)
	Notes for question 2	
2(a)	M1 Correct no. of terms, dim correct, condone sign errors but structure must be correct – allow consistently cancelled *m*'s or extra *g*'s	
	A1 Correct equation with one error	
	A1 Correct equation	
	A1 Allow 0.33 or better	
2(b)	M1 Condone sign errors but must have masses and speeds paired correctly and must be attempting a difference of momenta. Allow M1 if *k* is not substituted. M0 if *g* included	
	A1 Allow $\pm m\left(\frac{1}{2}u - -u\right)$ **OR** $\pm\frac{1}{3}m\left(\frac{3}{2}u - -3u\right)$ (no ft on *k*)	
	A1 cao Allow them to change a negative expression into a positve one	
	N.B. If they do (b) first, and obtain an impulse of magnitude *I*, then they do (a) : $I = km(\frac{3u}{2} - -3u)$, apply CLM scheme to their equation.	