Question Number	Scheme	Marks
1(a)	For P: $-\frac{21mu}{4} = 3m(v_P - 2u)$	M1A1
	$v_P = \frac{u}{4}$	A1 (3)
(b)	For Q: $\frac{21mu}{4} = m(v_Q - -4u)$	M1A1
	$v_Q = \frac{5u}{4}$	A1 (3)
OR	CLM: $3m \times 2u - m \times 4u = 3m \times \frac{u}{4} + mv_Q$ M1 A1	
	$v_Q = \frac{5u}{4}$ A1	
		(6)
	Notes for Qu 1	
	1(a) M1 for using Impulse = Change in Momentum of P (must have $3m$ in both terms) (M0 if *clearly* adding momenta or if g is included) but condone sign errors. First A1 for a correct equation. (N.B. Could have $-v_P$ in place of v_P) Second A1 for $\frac{u}{4}$ oe (must be positive) **N.B.** If they try to find v_Q first and then use CLM to find v_P, M1 for a complete method to find v_P, A1 for correct equations, A1 for the answer for v_P. If an incorrect v_Q is then just stated in (b), award relevant marks if seen in working for (a). If no attempt at (b), then no marks for (b).	
	1(b) M1 for using Impulse = Change in Momentum of Q (must have m in both terms) (M0 if *clearly* adding momenta or if g is included) but condone sign errors. First A1 for a correct equation. (N.B. Could have $-v_Q$ in place of v_Q) Second A1 for $\frac{5u}{4}$ oe (must be positive) **OR**: M1 for CLM with correct no. of terms, condone missing m's or extra g's and sign errors First A1 for a correct equation Second A1 for $\frac{5u}{4}$ oe (must be positive)	