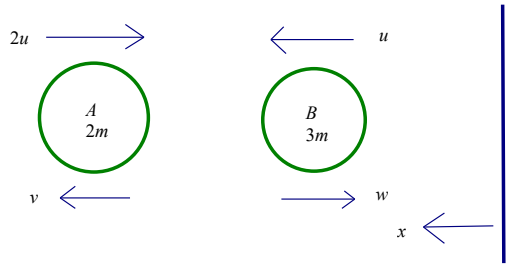
4a			
	Use of CLM	M1	Need all terms, dimensionally correct. Condone sign errors.
	$4mu-3mu=3mw-2mv$ $(u=3w-2v)$	A1	Correct unsimplified equation
	Use of impact law	M1	Used correctly. Condone sign errors
	$v+w=3eu$	A1	Correct unsimplified equation. Signs consistent with their CLM equation
	$\begin{cases} u=3w-2v \\ 6eu=2w+2v \end{cases}$	DM1	Dependent on both preceding M marks. Solve to find speed of B.
	$\Rightarrow 5w=u+6eu, \quad w=\frac{1}{5}u(1+6e)$ *	A1*	Obtain **given answer** from correct working
		[6]	
4b	$v=3eu-w=\frac{u}{5}(9e-1)$	B1	Check their diagram / directions and allow $v=\frac{u}{5}(1-9e)$ if correct for their working. Any equivalent form. Must be seen or used in (b)
	$x=\frac{u}{7}(1+6e)$	B1	Seen or implied. Accept $\pm$
	Second collision if $\frac{u}{7}(1+6e)>\frac{u}{5}(9e-1)$	M1	Correct inequality to find the upper limit for e, using their v and x
	$(0<)e<\frac{4}{11}$	A1	Final answer. Or equivalent Do not need to mention the lower limit, but if they do it must be stated correctly (strict inequality).
		[4]	