Question Number	Scheme	Marks
1	Impulse-momentum equation	M1
	$(7\mathbf{i}-5\mathbf{j})=4\mathbf{v}-4(2\mathbf{i}+3\mathbf{j})$	A1
	$\mathbf{v}=\frac{15}{4}\mathbf{i}+\frac{7}{4}\mathbf{j}$	A1
	$\lvert\mathbf{v}\rvert=\frac{1}{4}\sqrt{15^2+7^2}$	M1
	$=\frac{1}{4}\sqrt{274}=4.1\ (\text{m s}^{-1})$	A1
		(5)
		(5 marks)
Notes		
N.B. Column vectors are acceptable throughout		
M1	Use of Impulse-Momentum principle, dimensionally correct, correct number of terms and must be a *difference* of momenta (condone subtraction in wrong order)	
A1	Correct equation oe	
A1	Correct velocity seen or implied	
M1	Use of Pythagoras' on their **v**	
A1	Cao from a correct **v**. 4.1 or better (4.138236…)	