Question	Scheme	Marks	AOs
2.	$(1-c)\mathbf{i}+(2-10)\mathbf{j}$	M1	1.1b
	$(1-c)\mathbf{i}+(2-10)\mathbf{j}=5\mathbf{a}$	M1	3.1a
	Use of magnitude of resultant = 10 or magnitude of $\mathbf{a}$ = 2	DM1	2.1
	$(1-c)^2+(2-10)^2=10^2$ oe	A1	1.1b
	$c = 7$	A1	1.1b
		(5)	

(5 marks)

Notes: Allow use of column vectors

2.	M1	Clear attempt to add the forces, seen or implied. Must collect **i**'s and **j**'s
	M1	Use of $\mathbf{F} = 5\mathbf{a}$
	DM1	Must have a quadratic in c only, dependent on first M1
	A1	Correct unsimplified quadratic in c
	A1	A0 if they do not clearly reject $c = -5$