Question	Answer	Marks	Partial Marks
1(a)	$\begin{pmatrix}-2.5\\5\end{pmatrix}$ oe	**B2**	**B1** for $-\frac{1}{4}\begin{pmatrix}-2\\8\end{pmatrix}\left[+\begin{pmatrix}-3\\7\end{pmatrix}\right]$ oe, soi
1(b)	$3\alpha - 8 = 2\alpha + 5\beta$ or $18 - 2\beta = 20$	**M1**	Equates like vectors at least once
	$\alpha = 3$ $\beta = -1$	**A2**	**A1** for either value correct
2	$5x^2 - 10x - 15 * 0$ oe	**M1**	where * is any inequality sign or =
	Factorises *their* 3-term quadratic expression or solves *their* 3-term quadratic equation	**M1**	
	Critical values –1 and 3	**A1**	
	$-1 \leqslant x \leqslant 3$	**A1**	Do not accept separate inequalities unless connected with 'and'
3(a)	$(3-4)^2 + (-1+3)^2 = 5$ or showing that distance between point A and centre of circle = radius e.g. $\sqrt{(3-4)^2 + (-1+3)^2} = \sqrt{5}$	**B1**	Accept if x-coordinate substituted to find y- coordinate
3(b)	$\begin{pmatrix}4\\-3\end{pmatrix}+\begin{pmatrix}1\\-2\end{pmatrix}$ oe, soi or using centre and point A e.g. $\frac{3+x}{2} = 4$ and $\frac{-1+y}{2} = -3$ or solve simultaneously the line $y = -2x + 5$ with the circle leading to 3 term quadratic $x^2 - 8x + 15[=0]$ with an attempt to solve	**M1**	Award **M1** for the 2 equations Award the **M1** for the quadratic
	(5, –5)	**A1**	