Question		Answer	Marks	AO	Guidance
7		**Alternative for first 4 marks**			
		$\frac{dy}{dx}=\frac{k-x}{y+4}\Rightarrow\int(y+4)\,dy=\int(k-x)\,dx$	**M1***		Attempt to separate the variables and integrate to obtain an expression of the form $a(y+4)^2=b(k-x)^2(+c)$ for any non-zero constants a and b.
		$\frac{1}{2}(y+4)^2=-\frac{1}{2}(k-x)^2+c$	**A1**		cao $+c$ not required for this mark.
		$(2,1)\Rightarrow\frac{25}{2}=-\frac{(k-2)^2}{2}+c$ $\left(\Rightarrow c=\frac{25}{2}+\frac{(k-2)^2}{2}\right)$	**M1dep***		Attempt to find an equation containing the constant of integration by correctly using (2, 1) in their integrated expression. If correct, then $c=\frac{29-4k+k^2}{2}$.
		$(y+4)^2=-(k-x)^2+25+(k-2)^2$ oe or for $(r^2=)\,k^2-4k+29$	**A1**		Correct equation in completed square form e.g. $(k-x)^2+(y+4)^2-k^2+4k-29(=0)$ - accept any equivalent form. This mark can also be awarded for a correct un-simplified expression for r^2 but **only** from an implied **correct** circle equation (this expression may be imbedded in their working).