Question	Answer	Marks	Guidance
4(c)	$\frac{dy}{dx}\times\frac{dx}{dt}=\frac{dy}{dt}$ $2\sqrt{3}\times 3=\frac{dy}{dt}$	**M1**	For correct use of rates of change using *their* answer to **(a)**
	$\frac{dy}{dt}=6\sqrt{3}$	**A1**	
5(a)(i)	360	**B1**	
5(a)(ii)	Starts with 6: $1\times4\times3\times1\ \ =12$	**B1**	
	Starts with 7 or 9 : $=2\times4\times3\times2$ $=48$	**B1**	
	Total = 60	**B1**	
	Alternative		
	Ending in 4: $\frac{1}{6}\times360\times\frac{3}{5}=36$	**(B1)**	Allow unsimplified
	Ending in 6: $\frac{1}{6}\times360\times\frac{2}{5}=24$	**(B1)**	Allow unsimplified
	Total = 60	**(B1)**	
5(b)(i)	1287	**B1**	
5(b)(ii)	$1287-{}^{7}C_{5}$ or 1 doctor: 210 2 doctors: 525 3 doctors: 420 4 doctors: 105 5 doctors: 1	**M1**	For *their* **(b)(i)** $-{}^{7}C_{5}$ or listing all the other separate cases which must be evaluated, allow 1 error
	1266	**A1**	
5(b)(iii)	45	**B1**	
6(a)	Velocity vector = $\begin{pmatrix}-8\\6\end{pmatrix}$	**2**	**M1** for obtaining 5
	$\begin{pmatrix}30\\10\end{pmatrix}+\begin{pmatrix}-8\\6\end{pmatrix}t$	**B1**	**FT** for $\begin{pmatrix}30\\10\end{pmatrix}+(\textit{their}\text{ velocity vector})t$
6(b)	13	**B1**	