Question			Answer	Marks	AO	Guidance	
4	**(a)**		$r\theta = 15$	**B1**	**1.1**		
			$\frac{1}{2}r^2\theta = 45$	**B1**	**1.1**		
			$\frac{1}{2}r(15) = 45$	**M1**	**3.1a**	Accept any method for solving the equations simultaneously	
			$r = 6$ and $\theta = 2.5$	**A1**	**1.1**		
				[4]			
4	**(b)**		$\frac{1}{2}(6)^2 \sin\left(\frac{5}{2}\right)$	**B1FT**	**1.1**	FT their r and θ	
			$45 -$ their $\frac{1}{2}(6)^2 \sin\left(\frac{5}{2}\right)$	**M1**	**1.1**		
			$34.2\,(\text{cm}^2)$	**A1FT**	**1.1**	FT their r and θ	
				[3]			