Question	Answer	Marks	Guidance
9	$\left[\frac{dy}{dx} =\right] \frac{\frac{5}{3}(5x+2)^{-\frac{2}{3}} \times (x-1)^2 - 2(5x+2)^{\frac{1}{3}}(x-1)}{(x-1)^4}$ or $\left[\frac{dy}{dx} =\right] = \frac{5}{3}(5x+2)^{-\frac{2}{3}} \times (x-1)^{-2} + (5x+2)^{\frac{1}{3}} \times -2 \times (x-1)^{-3}$	**3**	**B1** for $\frac{5}{3}(5x+2)^{-\frac{2}{3}}$ **M1** for attempt at differentiation of a quotient or product. **A1** all other terms correct.
	$\frac{(5x+2)^{-\frac{2}{3}}}{3(x-1)^3}(5x-5-30x-12)$	**M1**	**Dep M1** for attempt to simplify by factorising $(5x+2)^{-\frac{2}{3}}$ or $(x-1)$ **nfww to the given form**, allow one arithmetic slip and/or one sign slip.
	$\frac{-(25x+17)}{3(x-1)^3(5x+2)^{\frac{2}{3}}}$	**A1**	Must be in correct form.

Question	Answer	Marks	Guidance
10	$40+20\theta=65$	***M1**	
	$\theta=1.25$	**A1**	
	$\sin\left(\frac{\textit{their }\theta}{2}\right)=\frac{\frac{1}{2}AB}{20}$ $AB=23.4$ or $\frac{1}{2}AB=11.7$	**2**	**Dep M1** for an attempt to find AB or $\frac{1}{2}AB$
	Either $\tan\left(\frac{\textit{their }\theta}{2}\right)=\frac{\text{height of triangle } ACB}{\textit{their }\frac{1}{2}AB}$ Height of triangle = 8.44 Area of triangle = 98.8	**3**	**DepM1** for a correct attempt to find the height of the triangle **M1** for attempt to find the area of the triangle using *their* height and *their AB* **A1** must be at least 3 significant figures.
	Or $\cos\left(\frac{\textit{their }\theta}{2}\right)=\frac{\textit{their }\frac{1}{2}AB}{AC}$ $AC=14.4$ Area of triangle $=\frac{1}{2}\times\textit{their }AB\times\textit{their }AC\times\sin\left(\frac{\theta}{2}\right)$ Area of triangle = 98.8	**(3)**	**DepM1** for a correct attempt to find CA **M1** for attempt to find the area of the triangle using the sine rule with *their CA*. **A1** must be at least 3 significant figures.
	Area of the segment $=\frac{1}{2}\times20^2\times(1.25-\sin1.25)$ Area of the segment = 60.2	**B1**	
	Area = 38.6	**A1**	