Question	Scheme	Marks
4	(a) $\frac{1}{2}r^2\theta = 15 \qquad \frac{1}{2}r^2 \times 1.2 = 15$	M1
	$r = \sqrt{\frac{30}{1.2}} = 5\text{cm}$	A1
	(b) $r\theta = 5 \times 1.2 = 6$ cm	M1A1ft
	(c) Area of $\Delta = \frac{1}{2} \times 5^2 \times \sin 1.2$	M1
	Area of segment $= 15 - \frac{1}{2} \times 5^2 \times \sin 1.2, = 3.35$ cm^2	M1,A1
	(Calculator in degree mode gives 14.7 - allow M marks if this is seen w/o working.)	
5	(a)	
	$(1+3x)^{\frac{1}{5}} = 1 + \frac{1}{5} \times 3x + \frac{\frac{1}{5} \times \left(-\frac{4}{5}\right)}{2!} \times (3x)^2 + \frac{\frac{1}{5} \times \left(-\frac{4}{5}\right) \times \left(-\frac{9}{5}\right)}{3!} \times (3x)^3 + \ldots$	M1
	$= 1 + \frac{3}{5}x, -\frac{18}{25}x^2, +\frac{162}{125}x^3, + \ldots$	A1,A1,A1
	(b)	
	$\left(1 - \frac{3}{8}\right)^{\frac{1}{5}} = \left(\frac{5}{8}\right)^{\frac{1}{5}} = \left(\frac{20}{32}\right)^{\frac{1}{5}} = \frac{1}{2} \times \sqrt[5]{20}$	M1A1
	$\left(1 - \frac{3}{8}\right)^{\frac{1}{5}} = 1 + \frac{3}{5} \times \left(-\frac{1}{8}\right) - \frac{18}{25} \times \left(-\frac{1}{8}\right)^2 + \frac{162}{125} \times \left(-\frac{1}{8}\right)^3$	M1
	$(= 0.91121875\ldots\ldots)$	
	$\sqrt[5]{20} = 2 \times 0.91121875.. = 1.82244$ (Give A1 for awrt this)	A1
	(c)	
	Series is only convergent for $\lvert x \rvert < \frac{1}{3}$ $\quad \therefore$ not convergent when $x = 1$	B1