Question	Working	Answer	Mark	Notes	
22	$\frac{\pi r^2}{\pi r^2 + \pi rl} = \frac{3}{8}$ **or** $\pi r^2 : \pi r^2 + \pi rl = 3:8$ **or**			M1	
	$\pi r^2 : \pi rl = 3:5$ **or** $\pi r^2 = 3$ **and** $\pi rl = 5$				
	$8\pi r^2 = 3(\pi r^2 + \pi rl)$ **or** $5\pi r^2 = 3\pi rl$ **or**			M1	
	$[r = \sqrt{\frac{3}{\pi}}\ (= 0.9772...)$ **and** $l = \frac{5}{\pi r}]$				
	$\frac{r}{l} = \frac{3}{5}$ oe **or** $l = \frac{5}{\pi\sqrt{\frac{3}{\pi}}}\ (= 1.62...)$			M1	
	e.g. $\sin\left(\frac{AVB}{2}\right) = \frac{3}{5}$ oe eg $\sin\left(\frac{AVB}{2}\right) = \frac{\sqrt{3/\pi}}{5/\pi\sqrt{3/\pi}}$			M1	$\sin^{-1}(\frac{3}{5}) = 36.86....$
	$2 \times \sin^{-1}\left(\frac{3}{5}\right)$ oe			M1	
		73.7	6	A1	awrt