

9(a)	$\frac{1}{2}r^2\alpha = 8\alpha \Rightarrow r = 4$
	$\frac{1}{2}r^2 \sin \alpha = 4 \Rightarrow \alpha = \frac{\pi}{6}$
	Area of segment = $\frac{1}{2} \times 4^2 \times \frac{\pi}{6} - 4$
	$= \frac{4}{3}\pi - 4$
9(b)	$r^2 + r^2 - 2r^2 \cos \alpha = \frac{1}{2}r^2 \Rightarrow 2 \cos \alpha = \frac{3}{2}$
	$\alpha = 0.723 [0.72273...] \Rightarrow \frac{1}{2}r^2 \sin(\text{their } 0.723) [= 4]$
	$r = 3.48 [3.4777...]$
	Area of segment = $\frac{1}{2} \times 3.48^2 \times 0.723 - 4 = 0.371 [0.37068...]$