Question	Working	Answer	Mark	Notes
22	$\pi\times(5r)^2\times\frac{45}{360}$ or $\pi\times(3r)^2\times\frac{45}{360}$ $\pi\times r^2\times\frac{45}{360}$ or $\pi\times(0.6r)^2\times\frac{45}{360}$ $\pi\times(5r)^2\times\frac{45}{360}-\pi\times(3r)^2\times\frac{45}{360}=\frac{81}{2}\pi$ or $\pi\times r^2\times\frac{45}{360}-\pi\times(0.6r)^2\times\frac{45}{360}=\frac{81}{2}\pi$ $r^2 = (40.5 \times 8) \div (1 - 0.36)$ or $r^2 = 506.25$ oe ($r = 22.5$) $r^2 = (40.5 \times 8) \div (25 - 9)$ or $r^2 = 80.25$ oe ($r = 4.5$) $(AB =)\ 2\times\pi\times'13.5'\times\frac{45}{360}\left(=\frac{27}{8}\pi\right)$ or $(PQ =) 2\times\pi\times'22.5'\times\frac{45}{360}\left(=\frac{45}{8}\pi\right)$ oe Perimeter = $\frac{'27}{8}\pi'+\frac{'45}{8}\pi'+'9'+'9'$	$9\pi+18$	6	M1 oe M2 for $0.64\pi r^2\times\frac{45}{360}=\frac{81}{2}\pi$ or M1 oe $16\pi r^2\times\frac{45}{360}=\frac{81}{2}\pi$ M1 or 1 share = 4.5 or $r = 22.5$ or $OA = 13.5$ or $AP = 9$ M1 dep on M3 or $2\times\pi\times('13.5'+'22.5')\times\frac{45}{360}(=9\pi)$ M1 dep on M4 A1 oe