22	(radius of large circle =) $\frac{4}{\cos 54}$ **or** $\frac{4}{\sin 36}$ **or** $\frac{8\sin 54}{\sin 72}$ **or** $\sqrt{\frac{8^2}{2-2\cos 72}}$ (= 6.805...) **or** (height of 1 triangle within pentagon =) 4tan54 (=5.505...) oe		6	M1	for a complete method to find the radius of the large circle **or** the perpendicular height of one triangle within the pentagon
	(area of large circle =) $\pi \times ("6.805...")^2$ (= 145.489...) oe **or** (area of sector =) $\frac{72}{360} \times \pi \times ("6.805...")^2$ (= 29.097...) oe			M1	for a complete method to find the area of the large circle **or** the area of a sector of the large circle
	(area of pentagon =) 5 × ½ × 8 × "5.505..." (= 80tan54 = 110.11...) **or** 10 × ½ × 4 × "5.505..." (= 80tan54 = 110.11...) **or** 5 × ½ × "6.805..." × "6.805..." × sin72 (= 110.11...) oe **OR** (area of one triangle =) ½ × 8 × "5.505..." (= 22.022...) **or** ½ × "6.805..." × "6.805..." × sin72 (= 22.022...) **or** ½ × "6.805..." × 8 × sin54 (= 22.022...) oe			M1	for a complete method to find the area of the pentagon **OR** the area of one triangle eg *OED* or equivalent
	$"145.489..." - "110.11..." + \pi r^2 = "110.11..." - \pi r^2$ oe **or** $5 \times ("29.097..." - "22.022...") + \pi r^2 = 5 \times "22.022..." - \pi r^2$ oe			M1	for a correct equation for the radius of the smaller circle
	$2\pi r^2 = 2 \times "110.11..." - "145.489..."$ (= 74.731...) oe			M1	for a correct rearranged equation with the area of the circle the subject or better
	Correct answer scores full marks (unless from obvious incorrect working)	3.45		A1	accept 3.43 – 3.45
					Total 6 marks