20	eg $2d \times 2d - 4 \times \pi \times (\frac{1}{2}d)^2 (= 40)$ oe or $4r \times 4r - 4 \times \pi \times r^2 (= 40)$ oe or $x^2 - 4\pi\left(\frac{1}{4}x\right)^2 (= 40)$ oe or $w^2 - \pi\left(\frac{1}{2}w\right)^2 (= 10)$ oe		4	M1	oe a **correct** expression or a correct equation for the shaded area (must be in one unknown only) where d = diameter r = radius x = side of large square w = side of square when shape divided into 4
	$d = \sqrt{\frac{40}{4-\pi}} (= 6.826...)$ or $2d = \sqrt{\frac{160}{4-\pi}} (= 13.652\ldots)$ oe $r = \sqrt{\frac{40}{16-4\pi}} (3.413...)$ or $4r = \sqrt{\frac{640}{16-4\pi}} (= 13.652...)$ oe $x = \sqrt{\frac{40}{1-0.25\pi}} (13.652\ldots)$ or $w = \sqrt{\frac{10}{1-0.25\pi}} (= 6.826\ldots)$oe			M1	oe a correct expression for d or $2d$ or r or $4r$ or x or w
	(perimeter =) 8 × "6.826…" (8 × diameter(or side of small square when divided)) or 16 × "3.413..." (16 × radius) oe or 4 × "13.652…"(4 × side of square)			M1ft	dep on first M1 For substituting values into a calculation for the perimeter use of **their** r, d, x, w
		54.6		A1	54.4 - 54.7
					Total 4 marks