Question	Answer	Mark	Mark scheme	Additional guidance
22	46	P1	for process to set up a correct equation for the full or partial perimeter of the large square, eg $4 \times (2x + x - 4) = 74$ **or** $12x - 16 = 74$ **or** $2x + x - 4 = 74 \div 4$ **or** $3x - 4 = 18.5$ **or** $2 \times (2x + x - 4) = 74 \div 2$ **or** $6x - 8 = 37$	
		P1	for process to isolate terms in x in a correct equation, eg $12x = 90$ **or** $3x = 22.5$ **or** $6x = 45$	For this mark to be awarded, step must be carried out, not just intention shown. For example, if you see $12x - 16 = 74$ $+ 16 \quad + 16$ Only award P1 when you see $12x = k$ where $k > 74$
		P1	for a complete process to solve for x in a correct equation, eg $x = \frac{90}{12} \ (= 7.5)$	May be implied by 15 or 3.5 correctly placed on diagram providing not contradicted
		P1	for full process to find perimeter of shaded shape, eg $4 \times ((2 \times$ "7.5") $-$ ("7.5" $- 4))$ oe or $74 - 8 \times$ ("7.5" $- 4)$ **or** $4 \times ((2 \times [x]) - ([x] - 4))$ oe or $74 - 8 \times ([x] - 4)$ **or** $4 \times$ ([length] $-$ [width]) **OR** for a correct expression for the perimeter of the shaded square, eg $4 \times (2x - (x - 4))$ **or** $4 \times (x + 4)$ **or** $74 - 8 \times (x - 4)$	$[x]$ must be clearly identified and $x > 4$ [length] and [width] must be clearly identified as the length and width of the rectangle **and** sum to $74 \div 4$ (= 18.5)
		A1	cao	