Topic Test 1 Mark Scheme

Perimeter and Area - Higher

Q	Answer	Mark	Comments
1	$4(x - 1.5)$ or $4x - 6$ or $3x$	M1	oe
	$4(x - 1.5) = 3x$ or $4x - 6 = 3x$	M1dep	oe Forms an equation in x from their two perimeters
	6	A1	
2	$0.5 \times 4 \times (5 + 11)$	M1	oe
	(their $32 \div 4$) $= 3.2x$ or (their $32 \div 4$) $\div 3.2$	M1	oe
	2.5	A1	
3	One correct relevant expression $12(2x + 6)$ or $8(2x + 6)$ or $4(x + 4)$ or $12(x + 4)$ or $8(x + 4)$ $8(x + 2)$ or $4(x + 2)$	M1	oe
	A complete 'set' of areas that would combine to give total area $12(2x + 6)$ and $4(x + 2)$ $8(2x + 6)$ and $4(x + 4)$ or $12(x + 4)$ and $8(x + 2)$ $4(x + 4)$ and $8(x + 4)$ and $8(x + 2)$	M1dep	oe The first pair are for the subtraction method
	$20x + 64$	A1	

Q	Answer	Mark	Comments
4a	$13.7^2 - 10.5^2$	M1	
	$\sqrt{13.7^2 \ \ 10.5^2}$ or 8.8	M1	
	(10.5 × their 8.8) ÷ 2 or 46.2	M1	Allow 10.5 × 8.8 or 92.4 for area of both triangles
	12 × 13.7 or 164.4 and 12 × their 8.8 or 105.6 and 12 × 10.5 or 126	M1	Allow one error
	488.4	A1	
4b	Too small – always overlap	B1	oe
5	504 – 144 or 360	M1	
	(their 360 ÷ 2) ÷ 12 or (their 360 ÷ 4) ÷ 6	M1	oe
	15	A1	
6	$\frac{1}{2}x \times 6 \times$ (sin30 or $\frac{1}{2}$) = 15	M1	
	10	A1	