

1		147	P1	starts process, eg uses x and $x + 7$
			P1	starts to work with at least 6 correct sides, may be on the diagram or in an expression
			P1	(dep on previous P1) gives a correct expression for the perimeter, eg $x + x + 7 + x + 7 + x + 7 + x + x + 7 + x + 7 + x + 7$ or adds at least 6 correct sides and equates to 70
			A1	for width = 3.5 oe and length = 10.5 oe
			B1	ft (dep P2) for correct area for their x

2	6	P1	for a process to set up an equation in x , eg $\frac{1}{2} \times 3x \times 3x = 162$	Must be a complete equation
		P1	for a process to simplify to x^2 eg $x^2 = 162 \times 2 \div 9$ or $x^2 = 36$	Can fit their equation if a quadratic
		A1	cao	

3	140	P1	for complete process to find sum of the interior angles of a pentagon eg $(5 - 2) \times 180$ or exterior $360 \div 5 = 72$, interior $180 - 72 = 108$, 108×5 OR for complete process to find sum of the exterior angles of the pentagon eg $(180 - x) + (180 - 2x) + (180 - 125) + (180 - 115) + (180 - 90)$	Must be a complete process that could lead to a figure of 540 if that process is evaluated incorrectly 360 must be identified as the sum of the exterior angles Award provided [angles in a pentagon] is greater than 400 Algebraic route needs to show both sides of the equation. LHS of equation may be simplified Award if 70 is given for either ABC or BCD on the diagram Award marks for 140 on the diagram with working and not contradicted by the answer line. Award 0 marks for 140 without working.
		A1	for sum of interior angles is 540 OR for sum of exterior angles is 360	
		P1	for start to process to find angle ABC eg [angles in a pentagon] - $115 - 125 - 90 (= 210)$ or $115 + 125 + 90 + x + 2x =$ [angles in a pentagon] OR $(180 - x) + (180 - 2x) + (180 - 125) + (180 - 115) + (180 - 90) = 360$	
		P1	for process to find angle ABC eg " $210 \div 3 (= 70)$ ", " 210 " divided in the ratio 2 : 1 or for process to find angle BCD eg $\frac{2}{3} \times "210"$ or for $3x = "210"$ or $-3x = -"210"$	
		A1	cao	

4	(a)	$T = 4n - 5$	M1	for $2n$ or $n - 5$ or $T =$ a linear expression in n	Allow variables other than n Each age must be an expression in n
			M1	for $n + 2n + n - 5$ oe OR for $T =$ an expression in n with 2 of 3 ages correct eg $T = n + n^2 + n - 5$	
			A1	for $T = 4n - 5$ oe eg $T = n + 2n + n - 5$	
	(b)	$5m - 3m = 2m$	B1	for $5m - 3m = 2m$ indicated	