

Paper: 1MA1/3F				
Question	Answer	Mark	Mark scheme	Additional guidance
11	110	M1	for use of angles in a quadrilateral add to 360° , eg $360 - 130 - 95 - 65 (= 70)$	May be seen in diagram or as a sum to 360° .
Q1		M1	for $180 - "70"$ or for $(130 + 95 + 65) - 180$	$(130 + 95 + 65) - 180$ gains M2
		A1	cao	

Paper: 1MA1/1F				
Question	Answer	Mark	Mark scheme	Additional guidance
27	132	M1	for finding an exterior angle eg $360 \div 6 (= 60)$ or $360 \div 5 (= 72)$ or an interior angle eg $180 \times 4 \div 6 (= 120)$ or $180 \times 3 \div 5 (= 108)$	Angles may be shown on the diagram Only award this mark for an angle that is not contradicted
Q2		M1	for a complete method eg $360 - "120" - "108"$ or $"60" + "72"$	Answer only award no marks
		A1	cao	

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Question	Working	Answer	Mark	Notes
19 Q3		Shows polygon is a hexagon	M1 M1 A1 C1	for a complete method to find the interior or exterior angle of the dodecagon eg $180 - \frac{360}{12}, \frac{180}{12}(12 - 2)$ oe (= 150), $360 \div 12$ (=30) for a complete method to find the interior angle of polygon P eg at <i>B</i> or <i>C</i> : $360 - "150" - 90$ (= 120) or $"30" + 90$ (= 120) or for a complete method to find the interior or exterior angle of the hexagon eg $180 - \frac{360}{6}, \frac{180}{6}(6 - 2)$ oe (= 120), $360 \div 6$ (= 60) for 30 and 120 or 30 and 60 or 120 and 150 or 60 and 150 complete solution, fully supported by accurate figures

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Question	Answer	Mark	Mark scheme	Additional guidance
28 Q4	24	P1 P1 A1	starts process, eg $x + 11x = 180$ or $180 \div 12$ (= 15) or interior angle + exterior angle = 180 oe complete process to find number of sides, eg $360 \div (180 \div 12)$ cao	

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Question	Answer	Mark	Mark scheme	Additional guidance
Q5	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
		A1	for sum of interior angles is 540 OR for sum of exterior angles is 360	360 must be identified as the sum of the exterior angles
		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 $(180 - x) + (180 - 2x) + (180 - 125) + (180 - 115) + (180 - 90) = 360$	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
		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"	Award if 70 is given for either ABC or BCD on the diagram
		A1	cao	Award marks for 140 on the diagram with working and not contradicted by the answer line. Award 0 marks for 140 without working.

Paper: 1MA1/2F				
Question	Answer	Mark	Mark scheme	Additional guidance
28	24	M1	for a complete method eg $360 \div 15 (=24)$	If extra steps are shown do not award this mark.
Q7		A1	cao	

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Question	Answer	Mark	Mark scheme	Additional guidance
29	45	P1	for $180 - 117 (=63)$ or states, or uses, exterior angle $+ x = 117$	Angles may be shown on the diagram.
Q8		P1	for process to find the exterior or the interior angle of the pentagon, eg $360 \div 5 (=72)$ or $180 - (360 \div 5) (=108)$ or $((5-2) \times 180) \div 5 (=108)$	Any angle labelled correctly as 63 and not contradicted scores this mark
		P1	for a complete process to find x , eg $180 - "72" - "63"$ or $"108" - "63"$ or $117 - "72"$	Exterior = 108 or interior = 72 does not score the mark
		A1	cao	An answer of 45 with no supporting working scores 0