

Q1 June 2017

19		Shows polygon is a hexagon	M1	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)
			M1	for a complete method to find the interior angle of polygon P eg at B or C: $360 - "150" - 90$ (= 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)
			A1 C1	for 30 and 120 or 30 and 60 or 120 and 150 or 60 and 150 complete solution, fully supported by accurate figures

Q2 June 2018

26	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.

Q3 June 2019

28	162 supported	M1	for method to find sum of the interior angles of a hexagon eg $(6 - 2) \times 180$ (= 720) oe OR for method to find sum of the interior angles of a pentagon, eg $(5 - 2) \times 180$ (= 540) OR for method to find angle AFC or BCF, eg $(360 - 2 \times 117) \div 2$ (= 63) OR for dropping a perpendicular from A or B to ED with 90° marked on ED and 27° at the top	Must be a complete process that would lead to a figure of 720 if evaluated correctly. For a pentagon there must be an indication that they have divided the hexagon into two halves. 63 may be shown on the diagram for angle AFC or angle BCF
		M1	for method to use ratio 2 : 1 eg marks as $2x$ and x or as x and $\frac{1}{2}x$ on diagram OR for [angle sum of hexagon] - $2 \times 117 \div 6$ (= 81) oe or [angle sum of hexagon] $\div 2 - 117 \div 3$ (= 81) oe or $117 + 117 + 2x + 2x + x + x$ = [angle sum of hexagon] oe OR eg [angle sum of pentagon] - $117 - 180 \div 3$ (= 81) oe or $117 + 180 + 2x + x$ = [angle sum of pentagon] oe	Ratio must be used correctly if awarded for diagram Award provided [angle sum of hexagon] is greater than 700 or [angle sum of pentagon] is greater than 500 Algebraic route needs to show both sides of the equation. LHS of equation may be simplified.
		M1	for finding angle FED = 81 or for finding angle CDE = 81 OR for complete process to find angle AFE eg [angle sum of hexagon] - $2 \times 117 \div 6 \times 2$ oe OR ([angle sum of pentagon] - $117 - 180 \div 3 \times 2$ oe	This may be shown by solving a correct equation to find the value of x.
		C1	for accurate working leading to angle AFE = 162	Award marks for 162 on the diagram with working and not contradicted by the answer line. Award 0 marks for 162 without working.

Q4 June 2022

6	drawing of a parallelogram	B2 (B1)	for an accurate drawing of a parallelogram that is not a rectangle or a rhombus for a quadrilateral drawn with no lines of symmetry or for a quadrilateral drawn with rotational symmetry of order 2)	Accept freehand drawings with some inaccuracy if the intention is clear
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Q5 June 2023

8	(a)	Square	C1	for statement of shape	Accept unambiguous misspellings.
	(b)	Cuboid	C1	for statement of solid	Accept unambiguous misspellings. Accept square based prism

Q6 Nov 2018

9	(a)	Trapezium	B1	cao	
	(b)	C and D	B1	cao	Accept in either order.

Q7 Nov 2019

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

Q8 Nov 2023

10	(a)	Pentagon	B1	cao	
	(b)	112.5	P1	for process to find total length using their edges eg 15×7.5 or $[\text{edges}] \times 7.5$	[edges] must be unambiguously identified
			A1	for 112.5 oe	

Q9 Nov 2024

7	(a)	Trapezium	B1	cao	
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