

Q1 June 2018

17	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	

Q2 June 2018

21	Triangle of area 18	M1	for a complete method to find area of trapezium eg $\frac{1}{2}(2+7) \times 4 (= 18)$ OR for a triangle drawn of area 36 OR for a triangle that would give an area fit their area of trapezium	The value for the area of the trapezium must be clear for the fit to be checked.
		A1	for a triangle drawn of area 18 eg base = 6, height = 6 or base = 9, height = 4	Accept use of dimensions that are not whole numbers as long as the intention is clear

Q3 June 2022

16	Triangle drawn	B2	for an isosceles triangle drawn with the product of the base and perpendicular height being 24, eg. 6×4 or 4×6 or 8×3 or 3×8	Accept triangle drawn in any orientation or drawn freehand.
		(B1	for any isosceles triangle drawn or for any triangle with 24 as the product of the base and the perpendicular height)	

Q4 June 2022

28	Complete chain of reasoning	M1	for (area of trapezium $TQRS = 0.5 \times 4x \times (2x + 3x)$ or for (area of rectangle $TUVS = 4x \times (3x + 5) (= 12x^2 + 20x)$	Evidence for the award of marks may be seen on the diagram
		M1	for (area of trapezium $QUVR = 4x(3x + 5) - 0.5 \times 4x \times (2x + 3x)$	Alternative methods may be seen.
		C1	for correct algebraic processing and simplification to the given form	
		M1	Alternative 1 for ($QU = 3x + 5 - 2x (= x + 5)$)	
		M1	for (area of trapezium $QUVR = 0.5 \times 4x \times ((x + 5) + 5)$ or $0.5 \times 4x \times (x + 10)$	
		C1	for correct algebraic processing and simplification to the given form	
		M1	Alternative 2 for (area of triangle $= 0.5 \times (3x - 2x) \times 4x$ or for (area of rectangle $= 4x \times 5$	Accept x for $(3x - 2x)$
		M1	for (area of trapezium $QUVR = 0.5 \times (3x - 2x) \times 4x + 4x \times 5$	
		C1	for correct algebraic processing and simplification to the given form	

Q5 June 2023

6	(a)	14	B1	cao
	(b)	18	B1	cao

Q6 Nov 2019

30	Result shown	M1	for finding the area of A or the area of B , eg $(\pi \times 15^2) \div 4$ (=56.25 π = 176.(7...)) or 177 or $\pi \times 2.5^2$ (= 6.25 π = 19.6(3...))	May work without π or with an approximation of π Values may be rounded or truncated
		M1	for finding the area of A and the area of B , eg $(\pi \times 15^2) \div 4$ or "6.25 π " $\times$ 9 (=56.25 π = 176.(7...)) or 177 AND $\pi \times 2.5^2$ or "56.25 π " $\div$ 9 (= 6.25 π = 19.6(3...))	
		C1	for conclusion eg, $\sqrt{56.25\pi \div 9 \div \pi} = 2.5$ oe or $\sqrt{\frac{6.25\pi \times 9 \times 4}{\pi}} = 15$ oe or 56.25 $\pi \div 9 = 19.6(3...)$ and $\pi \times 2.5^2 = 19.6(3...)$ oe or 6.25 $\pi \times 9 = 176.(7...)$ or 177 and $(\pi \times 15^2) \div 4 = 176.(7...)$ or 177 oe or for $((\pi \times 15^2) \div 4) \div (\pi \times 2.5^2) = 9$ oe	

Q7 Nov 2021

19	34 cm ²	P1	for finding one area eg 8×8 (= 64) or $0.5 \times 3 \times 5$ (=7.5)	for first stage in working with Pythagoras eg sight of $3^2 + 5^2$ or $9 + 25$	
		P1	for a complete process to find the area eg "64" – $4 \times$ "7.5" (=34)	for full use of Pythagoras eg $\sqrt{3^2 + 5^2}$ or $\sqrt{34}$ or 5.83...	Any figure used must come from a correct process
		A1	for an answer in the range 33.6 to 34		Can be awarded with incorrect units stated
		B1	(indep) for cm ²		Can be awarded with an incorrect or absent numerical answer

Q8 Nov 2021

27	18.3	P1	for finding the area of the triangle eg $0.5 \times 8 \times 8$ (=32)	Accept rounded or truncated figures
		P1	for finding the area of the circle $\pi \times 8 \times 8$ (= 201.06..)	
		P1	for finding the area of the sector eg $\frac{1}{4} \times \pi \times 8^2$ or "201.06.." $\div$ 4 (= 50.26...)	
		A1	for an answer in the range 18.2 to 18.3	If the answer is given within the range but then rounded incorrectly award full marks.

Q9 Nov 2023

18	4.8	P1	for finding missing length, eg $14 - 3.8 - 3.8$ (= 6.4)	
		P1	for method to find area of triangle, eg [missing length] $\times$ 6 $\div$ 2 (= 19.2)	Where [missing length] can be "6.4" or identified in working or on the diagram as the missing length
		P1	for method to find area of rectangle, eg [area of triangle] $\times$ 3.5 (= 67.2) or writes an expression for the area of rectangle eg $14w$ or $14w \div 3.5$	[area of triangle] must be identified as the area of the triangle OR come from: [missing length] $\times$ 6 $\div$ 2 or [missing length] $\times$ 6 or [decimal] $\times$ 6 $\div$ 2
		P1	for method to link both areas eg $14w =$ [area of triangle] $\times$ 3.5 or [area of triangle] = $14w \div 3.5$ or [area of triangle] $\times$ 3.5 $\div$ 14	
		A1	cao	Award 0 marks for a correct answer without correct supportive working.