



Published

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Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

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MARK SCHEME NOTES

The following notes are intended to aid interpretation of mark schemes in general, but individual mark schemes may include marks awarded for specific reasons outside the scope of these notes.

Types of mark

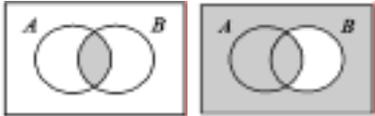
- M Method marks, awarded for a valid method applied to the problem.
- A Accuracy mark, awarded for a correct answer or intermediate step correctly obtained. For accuracy marks to be given, the associated Method mark must be earned or implied.
- B Mark for a correct result or statement independent of Method marks.

When a part of a question has two or more ‘method’ steps, the M marks are in principle independent unless the scheme specifically says otherwise; and similarly where there are several B marks allocated. The notation ‘**dep**’ is used to indicate that a particular M or B mark is dependent on an earlier mark in the scheme.

Abbreviations

awrt	answers which round to
cao	correct answer only
dep	dependent
FT	follow through after error
isw	ignore subsequent working
nfww	not from wrong working
oe	or equivalent
rot	rounded or truncated
SC	Special Case
soi	seen or implied

Question	Answer	Marks	Part marks
1(a)	4300	1	
1(b)	2.5 or $2\frac{1}{2}$	1	
2	25	1	
3	$(24 - 12) \div 3 = 4$	1	
4	30	2	M1 for correct first step If 0 scored SC1 for $30n, n > 1$
5	Correct angle drawn	1	
6(a)	20	1	
6(b)	10.5 oe	1	
7	[Pink] $\frac{5}{12}$ isw	1	
	[Yellow] $\frac{1}{12}$ isw	1	
	[Blue] 0	1	
8	-1	1	
9(a)	40, 60 and 80	2	B1 for 2 correct
9(b)	Correct pie chart	2	FT for 2 marks if <i>their</i> (a) angles add to 180 and only 3 sectors drawn B1 for 1 correct and labelled sector or for all sectors drawn but no or incorrect labels
10(a)	(6, 5)	1	
10(b)	(2, 7)	1	
11	800	3	M2 for 1.25×640 oe or M1 for 0.25×640 oe and A1 for 160
12	28 nfw	3	M1 for 16 seen for area of large rectangle or for 8 seen for area of small rectangle or for $0.5 \times 6 \times 4$ for area of triangle or for a trapezium $\frac{(8+2)}{2} \times 4$ or $\frac{(8+4)}{2} \times 6$ or for 64 for external square and M1 for correct method to combine <i>their</i> areas

Question	Answer	Marks	Part marks
13(a)	Segment correctly shaded	1	
13(b)	Radius correctly drawn	1	
13(c)	130	3	M2 for $180 - 50$ oe or AOP or $BOP = 65$ seen or B1 for $APB = 50$ or OAP or $OBP = 90$
14	Enlargement Scale factor $\frac{1}{2}$ [centre] (1, -1)	3	B1 for each
15		2	B1 for each
16	$x \geq 4$	2	M1 for $3x \geq 8 + 4$ or $\frac{3x}{3} - \frac{4}{3} \geq \frac{8}{3}$
17	Correctly eliminating one variable	M1	
	[x =] 5	A1	
	[y =] 1	A1	If zero scored SC1 for two values satisfying one of the original equations or for 2 correct answers without working