

Annual Examinations for Secondary Schools 2015

FORM 5

MATHEMATICS SCHEME D

MARKING SCHEME

Notes for Marking of Scripts

Types of Marks

- **M**(ethod) marks are awarded for knowing a correct method of solution and attempting to apply it. Method marks cannot be lost for arithmetic mistakes. They can only be awarded if the method used would have led to the correct answer had not an arithmetic mistake been made. In general a correct method is implied by a correct answer and therefore **when a correct answer is given and no work is shown, no method marks are lost.**
- **A**(ccuracy) marks are given for correct answer only (c.a.o.) Incorrect answers, even though nearly correct, score no marks. Accuracy marks are also awarded for incorrect answers which are correctly followed through (f.t.) from an incorrect previous answer, **provided that f.t. is indicated in the marking scheme.** No method (M) or accuracy (A) marks are awarded when a wrong method leads to a correct answer.
- **B** marks are accuracy marks awarded for specific results or statements independent of the method used.

Misreading

M marks can still be earned (unless that part of the question is trivialized) but the final A marks are lost.

Crossed out working

An answer or working that is crossed out and not replaced is marked as if it was not crossed out. If the answer or working is replaced, then the crossed out answer or working is ignored and should not be considered for marking.

Units

In general, missing or inaccurate units are not penalised unless otherwise indicated in the marking scheme.

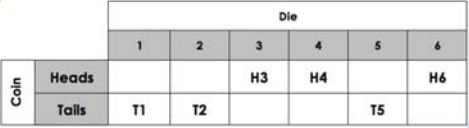
Other

- Incorrect working or statement following a correct answer is ignored.
- Marks are not sub-divisible; no half marks may be awarded.
- Other abbreviations used:
 - o.e. (or equivalent)
 - e.e.o.o. (each error or omission)
- Markers are advised to indicate the M, A or B marks awarded in the body of the script and then write their total in the margin. The total mark for each question should be written in the table included at the top of page 1 of the main paper. This measure facilitates the moderation of papers.

Non Calculator Paper (20 marks)

Que.		Requirements	Mark		Additional Guidance
1		$\frac{3}{4}$	B1	1	
2	a	2.20×4 8.80	M1 A1	4	Seen or implied
	b	$10 - 8.80$ $= 1.20$	M1 A1		Seen or implied f.t. from answer in part (a)
3	a	Correct pattern drawn	B2	3	Both correct
	b	13, 16	B1		
4		An enlargement	B1	1	
5	a	Correct drawing of arrows on clock	B1	3	
	b i)	Eight	B1		
	ii)	25	B1		
6	a	Correct drawing of three rectangles (6 by 2; 4 by 3; 12 by 1)	B3	5	Award 1 mark for each correct rectangle drawn
	b	X marked on the 12 by 1 rectangle	B1		f.t. from the rectangles drawn in part (a)
	c	26	B1		f.t. from answer in part (b)
7	a	$5x - 2$	B1	3	Seen or implied
	b i)	$4x + 6$	B1		
	ii)	$6x$	B1		

Main Paper (80 marks)

Que.		Requirements	Mark		Additional Guidance
1		Matching correctly	B4	4	Award 1 mark for each correct match
2	a	$10 \times 2 = 12 + 8$	B2	4	Both signs correct
	b	$30 \div 3 - 2 = 8$	B2		Both signs correct
3	a	6 and 5	B2	6	Award 1 mark for each correct entry
	b	8	B2		
	c	2 and 3	B2		Award 1 mark for each correct entry
4		Correct statement	M1	3	Seen or implied
		200×0.84	M1		Seen or implied
		168	A1		
5	a	Addition of temperatures $\frac{119}{7}$ 17	M1 M1 A1	6	Seen or implied Seen or implied f.t. for addition in part (a)
	b	15	B1		
	c	Temperatures written in ascending order 16	M1 A1		Seen or implied
6	a		B3	7	-1 e.e.o.o.
	b i)	$\frac{3}{12}$ or $\frac{1}{4}$	B2		Accept any of these answers
	b ii)	$\frac{2}{12}$ or $\frac{1}{6}$	B2		Accept any of these answers

Que.		Requirements	Mark	Additional Guidance
7	a	10 : 15 or $\underline{4} : 6$ or $2 : \underline{3}$	B1	4 Seen or implied Accept any other valid method
	b	$2 + 3 = 5$ $60 \div 5 = 12$ $12 \times 2 = 24$	M1 M1 A1	
8	a		B3	Award 1 mark for each correct match
	b i)	$4x = 13 + 7$ $x = \frac{20}{4}$ $x = 5$	M1 M1 A1	9 Seen or implied Seen or implied
	ii)	$2x = 6 \times 3$ $x = \frac{18}{2}$ $x = 9$	M1 M1 A1	Seen or implied Seen or implied
9	a i)	3	B1	8 Seen or implied Seen or implied Seen or implied
	ii)	2	B1	
	iii)	1	B1	
	b i)	$A = \frac{b \times h}{2}$ $\frac{5 \times 7}{2}$ 17.5	M1 M1 A1	
	ii)	17.5×3 52.5	M1 A1	

Que.	Requirements	Mark	Additional Guidance														
10	a $3.6 \div 4 = 0.9$ 90	M1 A1	8 Seen or implied Accept any other valid method Seen or implied (10 – 4 or 10000 – 4000)														
	b Changing 900 g and 350 g into kg or changing 1.5 kg into g Adding up masses 2.75	M1 M1 A1															
	c Changing 4000 m into km Subtraction seen 6	M1 M1 A1															
11	a A – Cube; B – Pyramid; C – Cuboid	B3	7 Award 1 mark for each correct answer Award 1 mark for each correct entry														
	b <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Shape</th> <th>Faces</th> <th>Vertices</th> <th>Edges</th> </tr> </thead> <tbody> <tr> <td>A</td> <td></td> <td>8</td> <td></td> </tr> <tr> <td>B</td> <td>5</td> <td></td> <td>8</td> </tr> <tr> <td>C</td> <td></td> <td>8</td> <td></td> </tr> </tbody> </table>	Shape		Faces	Vertices	Edges	A		8		B	5		8	C		8
Shape	Faces	Vertices	Edges														
A		8															
B	5		8														
C		8															
12	a $a = 35$ Vertically opposite angles	B2 B1	7 Seen or implied Seen or implied														
	b $b = 70$ $180 - 70 - 70$ or $180 - 140$ $c = 40$ Sum of angles in a triangle	B1 M1 A1 B1															
13	a 4	B1	7														
	b 512	B1															
	c 45 or 4800	B1															
	d 4800	B1															
	e 13607	B1															
	f 19	B1															
	g 121 or 4	B1															