

**Annual Examinations for Secondary Schools 2014**

**FORM 1**

**MATHEMATICS**

**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

No.	Answers	Marks	Level	Total	
1.	a	949 – 113 or 735 + 101 = 836	M1 A1	7	5
	b	63	B1	6	
	c	50 000	B1	7	
	d	14	B1	6	
2.	a	12.3	B1	6	3
	b	accept any correct method = 14.3	M1 A1	7	
3.	a	3000 3000 – 100 = 2900	M1 A1	7	4
	b	accept any correct method = 1375	M1 A1	7	
4.	a	30	B1	6	2
	b	–36	B1	6	
5.	a	0.9	B1	6	2
	b	95	B1	7	
6.	ai	1, 2, 3, 4, 6, 8, 12, 24	B2 all correct (B1 for 4 correct)	7	7
	aii	1, 4	B1 (f.t.)	7	
	b	10, 15, 20, 25	B2 (–1 e.e.o.o.)	6	
	c	accept any correct method = $2 \times 2 \times 2 \times 3 \times 3$ (o.e.)	M1 A1	7	
7.	a	$\frac{5}{7}$	B1	7	2
	b	65	B1	6	
<b>Total Non Calculator: 25 MARKS</b>					

## Main Paper

No.	Answers	Marks	Level	Total	
1.	a	-13, -7, -1, 5, 7, 8	B1 for identifying smallest B1 all numbers in order	7	6
	bi	6900	B1	7	
	bii	6924	B1	6	
	ci	5 tens (o.e.)	B1	6	
	cii	5 thousand (o.e.)	B1	6	
2.	a	1425	B1	6	6
	b	90	B1	7	
	c	8 : 36 2 : 9	M1 A1	7	
	d	3 m = 300 cm = 300	M1 A1	7	
3.	a	1.5 or $1\frac{1}{2}$	B1	7	2
	b	correct drawing	B1	7	
4.	a	square and equilateral triangle	B1, B1	7	8
	b	trapezium, kite, parallelogram	B1, B1, B1	7	
	c	drawing of big circle accurately drawing of two small circles accurately drawing of pattern accurately (3 points of contact)	M1 M1 A1	6	
5.	a	unlikely	B1	6	3
	b	impossible	B1	6	
	c	certain	B1	6	
6.	a	multiply by 9 or add 48	B1	7	
	b	28 + 3 = 31	M1 A1	7	

No.	Answers	Marks	Level	Total	
	c	substitute $p = 5$ in formula correctly $C = 5(15)$ (o.e.) $C = 75$	M1 M1 A1	6	6
7.	a	accurate drawing of lines AB and BC completion of drawing of triangle	M1, M1 A1	7	4
	b	yes accept any three acute angles that add up to $180^\circ$	B1 (both correct)	7	
8.	a	108 (addition) $\frac{108}{9} = 12$	M1 A1 (f.t.)	7	4
	b	putting numbers in order (seen or implied) $= 14$	M1 A1	7	
9.	a	drawing of an obtuse angle accurate drawing ( $\pm 1^\circ$ )	M1 A1	7	9
	b	$a = 180 - 155 = 25$ $b = 180 - 90 - 25$ (seen or implied) $b = 65$ $c = 360 - 110 - 100 - 120$ (seen or implied) $c = 30$ $d = 40$ $e = 80$	B1 M1 A1 (f.t.) M1 A1 B1 B1	7	
10.	a	valid attempt at reading values of bars $30 + 50 + 90 + 30 + 10$ $= 210$	M1 M1 A1 (f.t.)	7	4
	b	40 students, scoring low marks, are less than half the number of students who sat for the examination (or any other valid reason)	B1	7	
11.	a	$23 - 15$ (seen or implied) $= 8$	M1 A1	6	7
	bi	14, 17	B1 (both correct)	7	
	bii	5, 3	B1 (both correct)	7	

No.	Answers	Marks	Level	Total	
	c	$25 = tin + 2 + 3$ (o.e.) $20 = tin$	M1 A1	6	6
12.	a	$Q = (4, 1)$	B1	6	3
	b	drawing the 2 lines RS and PS and forming the required parallelogram	M1 A1	7	
13.	ai	B	B1	6	8
	aii	C	B1	6	
	b	any correct method to add squares (seen or implied) $= 33$	M1 A1	6	
	c	$8 \times 2 = 16$ $5 \times (8 - 3 - 3) = 10$ area of cross section = $16 + 10 = 26$ accept any other correct method volume = $26 \times 2 = 52$	M1 M1 M1 A1 (f.t.)	7	
14.	a	14, 25	B1, B1	6	6
	bi	correct plotting of the three points drawing of the required line by joining the points	M1 A1	7	
	bii	y is twice x accept any other correct method $y = 2x$	M1 A1	7	
<b>Total Main: 75 MARKS</b>					