



KULLEGG SAN BENEDITTU

Secondary School, Kirkop

TRACK

CCP

HALF YEARLY EXAMINATION – 2015/2016

FORM 4

MATHEMATICS

Marking Scheme

Aids 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 mark 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 were 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 mark scheme.

Other

- Incorrect working or statements following a correct answer are 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 (Total: 25 Marks)

No.	Answers	Marks	Total
1	a) 8317.9 b) 56.723 c) Valid attempt 763.16 d) Valid attempt 7.415	B1 B1 M1 A1 M1 A1	6
2	60 seconds – 1minute 7 days – 1 week 12 months – 1 year 24 hours – 1 day 60 minutes – 1 hour	B1 B1 B1 B1 B1	5
3	a) $P = 3 + 4 + 5$ $P = 12 \text{ cm}$ <i>Seen or implied</i> b) $A = (b \times h) \div 2$ $A = (3 \times 4) \div 2$ $A = 6\text{cm}^2$ <i>Seen or implied</i>	M1 A1 M1 M1 A1	5
4	a) Colour 6 boxes Colour 9 boxes Colour 6 sectors b) $\frac{3}{4} = \frac{6}{8} = \frac{9}{12}$	B1 B1 B1 B1, B1	5
5	a) 17, 19, 21, <u>23</u> , <u>25</u> b) 40, 35, 30, <u>25</u> , <u>20</u>	B1, B1 B1, B1	4

Main Paper

No.	Answers	Marks	Total
1	Twelve thousand, five hundred and forty six <i>Award B1 for any 2 correct entries</i> 1,200,319 <i>Award B1 for correct place value of 'one million'</i>	B2 B2	4
2	a) $€1.25 + 0.75 = €2$ <i>Seen or implied</i> <u>Snack, Juice</u> b) $€1.00 + 0.75 + 0.55 = €2.30$ <i>Seen or implied</i> $€5.00 - €2.30 = \underline{\underline{€2.70}}$	M1 B1, B1 M1 M1, A1	6
3	a) $24 \div 4 = 6$ <i>Seen or implied</i> b) $72 \div 6 = 12$ <i>Seen or implied</i> c) $\frac{24}{72}$ (o.e.) d) $\frac{3}{5} + \frac{1}{10} = \frac{6}{10} + \frac{1}{10} = \frac{7}{10}$	M1, A1 M1, A1 B1 f.t. B1 B1, B1 B1, B1	10
4	a) $+30^{\circ}\text{C}$ b) -20 m c) $+100\text{ m}$ d) -40°C e) $-€70$ f) $+€50$ Numbers placed correctly on number line <i>-1 e.o</i>	B1 B1 B1 B1 B1 B1 B6	12
5	a) i. 2000 ii. 20 iii. 1000 b) $\frac{2000 \times 20}{1000}$ 40 <i>f.t. for incorrect values in (a)</i> c) 38.9434555 39	B1 B1 B1 M1 A1 f.t. M1 A1	7
6	a) <i>correct conversion 1kg = 1000g or vice versa seen or implied</i> $1000\text{g} + 500\text{g} + 750\text{g}$ (o.e.) 2250g (o.e.) $2\text{kg } 250\text{g}$ b) $4000 - 2250$ 1750 $1\text{kg } 750\text{ g}$	M1 M1 M1 A1 M1 M1 A1 f.t.	7

7	<p>a) Tue 29, Wed 30 Thur 31</p> <p>b) 14th March</p> <p>c) 5</p> <p>d) Draws clock hands correctly</p> <p>e) Draws clock hands correctly</p>	<p><i>Both seen</i></p> <p><i>Award mark only if no further days are marked</i></p> <p><i>Accept hour hand exactly on 5</i></p> <p><i>Accept hour hand exactly on 6</i></p>	<p>B1</p> <p>B1</p> <p>B1</p> <p>B1</p> <p>B2</p> <p>B2</p>	8
8	<p>a)</p> <p>2345, 2543, 3245, 3425, 4235, 5324</p> <p>b)</p> <p>12 678, 17 682, 21 768, 26 781, 67 218, 76 218</p>	<p><i>Smallest correct</i></p> <p><i>Largest correct</i></p> <p><i>Smallest correct</i></p> <p><i>Largest correct</i></p>	<p>B1</p> <p>B1</p> <p>B1</p> <p>B1</p> <p>B1</p> <p>B1</p>	6
9	<p>Day 2: $84.80 \div 2$ (o.e.) €42.40</p> <p>Day 3: $84.80 \div 4$ (o.e.) €21.20</p> <p>Total cost €420 + €84.80 + €42.40 + €21.20 + €125.25 €693.65</p>	<p><i>f.t. from day 2 and 3</i></p>	<p>M1</p> <p>A1</p> <p>M1</p> <p>A1</p> <p>M1</p> <p>A1 f.t.</p>	6
10	<p>a) i) 7cm (± 0.2 cm) 4cm (± 0.2 cm)</p> <p>ii) $7 + 4 + 7 + 4 = 22$ cm</p> <p>iii) $7 \times 4 = 28$ cm²</p> <p>b) Distance between two villages - 1.5 km John's height - 150 cm Length of this line - 15 mm</p>	<p><i>f.t. for values in (a) (i)</i></p> <p><i>f.t. for values in (a) (i)</i></p>	<p>B1</p> <p>B1</p> <p>M1, A1</p> <p>M1, A1</p> <p>B1</p> <p>B1</p> <p>B1</p>	9