



# KULLEĠĠ SAN BENEDITTU

## Secondary School, Kirkop

### HALF YEARLY EXAMINATION – 2015/2016

TRACK

1

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 (20 marks)**

Question 1	Question 2	Question 3	Question 4	Question 5
any value in that range	5	(b) or 47	12.3	$-3x + 5y - 7$
Question 6	Question 7	Question 8	Question 9	Question 10
3.92kg or 3920g	(b) or 0.7	(c) or 400	45.78	D
Question 11	Question 12	Question 13	Question 14	Question 15
10	5	30ml; 4 days	10,000	g; m
Question 16	Question 17	Question 18		
C	€10	C. or (4,3 )		

**MAIN PAPER (80 marks)**

Quest.	Requirements	Mark	Additional Guidance	Total
<b>1</b>	a) Shaun – 1.82 m Anna – 170 cm Jessica – 1.9 m	B1 B1 B1		6
	b) 38	B1		
	c) A and B in correct position	B1, B1		
<b>2</b>	a) 5.9, 7.5	B1, B1		8
	b) 199.06 199.1	M1 A1	Seen or implied	
	c) 182.5 183	M1 A1	Seen or implied	
	d) 0.375, 0.402, 0.42, 1.2	B2	Award B1 if first and last numbers are correct	
<b>3</b>	a) Correct substitution 12	M1 A1	Seen or implied	5
	b) Correct substitution 4 + 2 6	M1 M1 A1	Seen or implied Seen or implied	

Quest.		Requirements	Mark	Additional Guidance	Total
4	a)	$27.87 \div 3$ €9.29	M1 A1	Seen or implied	8
	b)	$9.29 \div 20$ 0.4645	M1 A1	Seen or implied	
	c)	i) 0.46 ii) 0.50	B1 B1		
	d)	Nearest 10 cents Because he makes a profit	B1 B1	Accept any valid reason	
5		Wins = $26 \times 3$ ; Draws = $9 \times 1$ Loss = $3 \times 0$ Total points = $78 + 9 + 0$ = 87	M2  M1 A1	Seen or implied	4
6	a)	$x + 3 + 6x + 15 - x$ $6x + 18$	M1 A1	Seen or implied	5
	b)	$6(2) + 18$ $12 + 18$ 30	M1 M1 A1		
7	a)	$0.4 + 0.5 + 0.2$ 1.1	M1 A1	Or $400 + 500 + 200$	5
	b)	170, 2.8, 1.5	B3	Award one mark for each correct answer	
8	a)	10°C	B1		4
	b)	72°F	B1		
	c)	i) 0°C ii) 104°F	B1 B1		
9	a)	27	B1		7
	b)	4 or 9 or 36 or 64	B1		
	c)	91	B1		
	d)	Any two of 24, 36 and 48	B1, B1		
	e)	Any two of 2, 3, 6 and 9	B1, B1		

Quest.		Requirements	Mark	Additional Guidance	Total
<b>10</b>	a)	$120 \times 12.50$ ; $12 \times 15$ $1500 + 180$ $1680$	M1 M1 A1	Seen or implied	6
	b)	$P = 12.5n + 15t$	B3		
<b>11</b>	a)	L-shaped using three squares	B2		6
	b)	Correct drawing of net with two pairs of a 4 cm by 3cm and a 4 cm by 2 cm rectangles, and a 3 cm by 2 cm rectangle on each side	B4		
<b>12</b>	a)	Output $y = 4$ Input $x = 4$	B1 B1		8
	b)	(2, 4) and (4, 10)	B1, B1	F.t. from answer in (a)	
	c)	Correct plotting of two points Drawing of line passing through the two points and <u>point A</u>	B1 B1	F.t. from answer in (b)	
	d)	(-2, -8) and (5, 13)	B1, B1		
<b>13</b>	a)	i) A, D ii) B, 3 iii) C	B1, B1 B1, B1 B1		8
	b)	i) Correct drawing of octagon ii) 3 lines of symmetry drawn iii) 4	B1 B1 B1		
					<b>80</b>