

KULLEĠĠ SAN BENEDITTU

Secondary School, Kirkop

HALF YEARLY EXAMINATION – 2015/2016

TRACK

1

FORM 3

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.

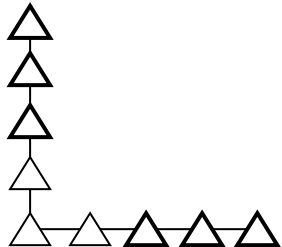
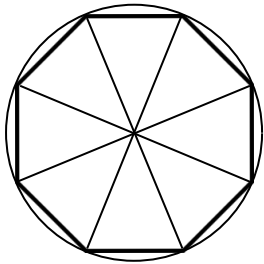
Other

- 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)

Quest.		Requirements	Mark	Additional Guidance	Tot
1.	a)	i) 90 ii) 2	B1 B1		3
	b)	400	B1		
2.	a)	i) $\frac{2}{9}$ ii) $\frac{5}{10} + \frac{4}{10} = \frac{9}{10}$	B1 M1 A1		4
	b)	$\frac{1}{2}, \frac{4}{8}$	B1	(both correct)	
3.	a)	● ● ● ● ● ● ● ● ● ●	B1		2
	b)	14	B1		
4.	a)	i) -1 ii) $4 + 5 = 9$	B1 B1		3
	b)	$23 - 2 = 21$	B1		
5.		$100 + 92 + 81 = 273$ $360 - 273 = 87$	M1 A1		2
6.	a)	50, 1	B1	(both correct)	3
	b)	$\frac{1}{2} \times 80 = 40$	M1 A1		
7.		Yes $2(2) + 1 = 5$	B1 B1		2
8.	a)	True	B1		3
	b)	False	B1		
	c)	True	B1		
9.	a)	11	B1		3
	b)	Any correct solution such as: 1 and 3 or 3 and 2	B2		

MAIN PAPER (Total: 75 Marks)

1.	a)	$\frac{1}{6} + \frac{1}{3} = \frac{1}{6} + \frac{2}{6}$ $= \frac{3}{6} = \frac{1}{2}$	M1 A1		4
	b)	$\frac{6}{10} - \frac{3}{10}$ $= \frac{3}{10}$	M1 A1		
2.	a)	20	B1		2
	b)	68	B1		
3.	a)		B3	-1 e.e.o.o.	6
	b)	13	B1		
	c)	$10 \times 2 - 1$ 19	M1 A1		
4.	a) i)	2	B1		5
	ii)	Mdina	B1		
	b)	2 hours + 2 hours = 4 hours 6 km/h \times 4 hours 24 km	M1 M1 A1		
5.		TIME \rightarrow LITRES VOLUME \rightarrow METRES WEIGHT \rightarrow GRAMS DISTANCE \rightarrow MINUTES	B4	B1 for each correct matching	4
6.	a)	$360^\circ \div 5$ $= 72^\circ$	M1 A1		6
	b)	$360^\circ \div 8 = 45^\circ$ 	B1 M1 M1 A1	Constructing one 45° angle Constructing four 45° angles Fully correct answer	

7.	a)	2	B1		6
	b)	i) 14	B1		
		ii) $b = \frac{24}{4}$ $b = 6$	M1 A1		
		iii) $2c = 18$ $c = 9$	M1 A1		
8.	a)	i) 40	B1		8
		ii) $\frac{40}{100} \times 250$ $\frac{2}{5} \times 250$ 100	M1 M1 A1	At least one simplification step (seen or implied)	
	b)	i) $\frac{10}{100} \times 90$ 9	M1 A1		
		ii) $90 - 9$ 81	M1 A1		
9.	a)	Attempt to find the middle mark 48	M1 A1		8
	b)	Adding all marks and dividing by 11 Mean is 43	M1 A1		
	c)	60	B1		
	d)	$76 - 11$ $= 65$	M1 A1		
	e)	This mark is above the median and above the mean	A1	Accept other valid explanations	
10.	a)	$7a + 8b$	B2	1 mark for each term	8
	b)	$3(3x + y)$	B2	1 mark for each factor	
	c)	$3(2) + 5(3) - 3(4)$ $6 + 15 - 12$ $= 9$	M1 M1 A1		
	d)	$6x - 12y$	B1		
11.	a)	half (or 30 minutes), eight	B2		3
	b)	40	B1		
12.	a)	30	B1		6
	b)	49	B1		
	c)	2	B1		
	d)	180	B1		
	e)	6	B1		
	f)	80	B1		
13.		200 °C 2355 m -5 m -8°C	B4		4
14.	a)	$50 + 20 = 70$ $70 - 100$ -30	M1 M1 A1		5
	b)	$8 - -4$ 12	M1 A1	Seen or implied	