

# KULLEGG SAN BENEDITTU

## Secondary School, Kirkop

### HALF YEARLY EXAMINATION – 2016/2017

#### FORM 4 TRACK 1

#### 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)**

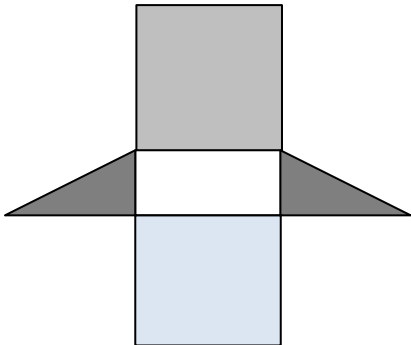
Question 1	Question 2	Question 3	Question 4	Question 5
16 000	8 000 000	$3a + b + 8$	thousand (o.e.)	D) a pentagon
Question 6	Question 7	Question 8	Question 9	Question 10
0.31	XY	a) 4   b) 27	6.23	110
Question 11	Question 12	Question 13	Question 14	Question 15
B) 80	A	$8mn$	5	Arrow pointing at 2.8 cm
Question 16	Question 17	Question 18	Question 19	
42	6 : 3 : 10	$\frac{13}{20}$	9	

**MAIN PAPER (80 marks)**

Quest.	Requirements	Mark	Additional Guidance	Total
<b>1</b>	a) 25.62	B1		5
	b) 10, 10.06, 10.17, 10.22, 10.8	B2	Give B1 if partially correct	
	c) 15 – 7.6 7.4	M1 A1	Seen or implied	
<b>2</b>	a) B – 2250 ml C – 2.4 litres D – 2760 cm <sup>3</sup> E – 2.83 litres F – 2920 cm <sup>3</sup>	B4	–1 e.e.o.o.	6
	b) $2.83 \times 1000$ 2830	M1 A1	Seen or implied	

<b>3</b>	a)	i) $10 + \frac{5}{2}$ 12.5 ii) $(4 \times 6^2) - 9^2$ 144 – 81 63	M1 A1 M1 M1 A1	Seen or implied o.e.	8
	b)	$\frac{5}{100} \times 150 = 7.50$ 150 – 7.50 142.50	M1 M1 A1	Accept other valid methods f.t.	
<b>4</b>	a)	6	B1		6
	b)	54	B1		
	c)	11	B1		
	d)	42	B1		
	e)	4	B1		
	f)	8	B1		
<b>5</b>	a)	6000 × 500 3 000 000 Incorrect	M1 M1 A1		6
	b)	800 ÷ 20 40 Correct	M1 M1 A1		
<b>6</b>	a)	6.3 × 1000 6300	M1 A1	Seen or implied	4
	b)	987.54 ÷ 100 9.8754	M1 A1	Seen or implied	
<b>7</b>	a)	$\frac{80 \times 3}{2}$ 120	M1 A1	o.e.	6
	b)	i) €4 ii) $(80 \times 4) + (120 \times 8)$ 320 + 960 1280	B1 M1 M1 A1	Seen or implied f.t.	

8	a)	$2x + 3 + 4x - 1 + 3x$ $9x + 2$	M1 A1	Seen or implied	4
	b)	$2x \times 5x$ $10x^2$	M1 A1	Seen or implied	
9		Valid attempt at finding unit price $1.50 \div 8 = \text{€}0.1875$ $4.96 \div 24 = \text{€}0.20666\dots$ Regular Packet	M1 M1 M1 A1	Accept other valid methods	4
10	a)	Plotting of points A, B, C, D.	B4	-1 e.e.o.o. Do not penalize students if labels not seen.	9
	b)	Joining of points	B1		
	c)	1	B1		
	d)	trapezium	B1		
	e)	Correct reflection of shape ABCD	B2	-1 e.e.o.o.	
11	a)	i) Card <b>Z</b> ii) Card <b>Y</b>	B1 B1		4
	b)	Accept any <i>reasonable</i> size as long as it is greater than 10.6 cm and 8.1 cm.	B2	-1 e.e.o.o. f.t.	
12	a)	Next pattern using 3 tables drawn correctly	B2	-1 e.e.o.o.	9
	b)	8, 10 $10 + 2 + 2 + 2$ 16	B1 M1 A1	Both correct Seen or implied	
	c)	i) $15 \times 2 = 30$ $30 + 2 = 32$ ii) $22 - 2 = 20$ $20 \div 2 = 10$	M1 A1 M1 A1	Seen or implied  Seen or implied	

13	a)	Prisms – A, D Pyramid – B, C	B2 B2	–1 e.e.o.o. –1 e.e.o.o.	9
	b)	i) 3D ii) 5 iii) triangle	B1 B1 B1		
	c)		B1 B1	For triangle For rectangle Award marks even if the size of the shapes are not accurate.	
					80