



# KULLEGG SAN BENEDITTU Secondary School, Kirkop

Level

6 – 7

## HALF YEARLY EXAMINATION – 2015/2016

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YEAR 7

MATHEMATICS

Marking Scheme

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### 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)**

Ques.		Requirements	Mark		Additional guidance																
1.	a	23	B1	2																	
	b	36	B1																		
2.	a	514	B1	6																	
	b	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td></td> <td>200</td> <td>180</td> <td>380</td> </tr> <tr> <td></td> <td>60</td> <td>54</td> <td>114</td> </tr> <tr> <td></td> <td></td> <td></td> <td>494</td> </tr> </table>							200	180	380		60	54	114				494	B3 A1 f.t.	B1 for every two correct entries  A1 mark for total
	200	180	380																		
	60	54	114																		
			494																		
c	$500 - 494 = 6$	A1 f.t.																			
3.	a	7	B2	4																	
	b	16, 36, 64, 100, ...	M1 A1		for listing any multiples of 4 <b>and</b> square numbers for any correct result																
4.	a	$\frac{8}{10} = 0.8$	M1 A1	6																	
	b	42% or $\frac{42}{100}$	B1																		
	c	$\frac{24}{100} = \frac{6}{25}$	M1; A1																		
	d	$\frac{2}{9}$	B1																		
5.	a	$€1.45 \times 5 = €7.25$	A1	5																	
	B	$€0.70 \times 7$ €4.90	M1 A1		Award M1 if 490c is seen																
	c	$€7.25 + €4.90 = €12.15$ $€15.00 - €12.15 = €2.85$	M1 A1 f.t.																		
6.		$315 \div 15$ 21	M1 A1	2																	
		<b>Total marks</b>		<b>25</b>																	

**Main Paper** (Total: 75 Marks)

Ques.		Requirements	Mark	Additional Guidance
1.	a.	430,146	B1	2 Ignore spelling mistakes
	b.	Thirteen thousand, one hundred and fifty.	B1	
2.	a.	15	B1	5
	b.	3, 13	B1;B1	
	c.	4	B1	
	d.	25	B1	
3.	a.i	3,249	B1	4 For correct smallest value
	a.ii	14	B1	
	b.	0.53, 5.03, 5.3, 53	M1 A1	
4.		B1 B1 B1	3 B1 for each correct matching	
5.	a.	Correct angle drawn ( $\pm 2^\circ$ )	B2	4
	b.	Correct angle drawn ( $\pm 2^\circ$ )	B2	
6.	a.	Addition of ages = 286 $\begin{array}{r} 286 \\ 11 \\ \hline 26 \end{array}$	M1 M1 f.t. A1	7 Attempt Award mark for attempt to order
	b.	18, 20, 25, 25, 25, 25, 26, 28, 31, 31, 32 25	M1 A1	
	c.	True Mode will remain 26	B1 A1	

7.	a.	$\frac{7}{8}$	B1	3	Attempt for dividing 7 by 8														
	b.	$7 \div 8$ 0.875	M1 A1 f.t.																
8.	a.	640 g	B1	2															
	b.	37.4°C	B1																
9.	a.	$\frac{5}{20} = \frac{1}{4}$	B1; B1	7	Award mark if correct fraction is seen														
	b.	$\frac{6}{20} \times 100$ 30%	M1 A1																
	c.	$\frac{5}{20} + \frac{4}{20}$ $\frac{9}{20}$	B1 B1 A1																
10.	a.	Correct drawings seen	B1 B1	8	(-1e.e.o.o.)														
	b.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td>5</td></tr> <tr><td> </td><td>6</td></tr> <tr><td> </td><td>7</td></tr> <tr><td> </td><td>8</td></tr> </tbody> </table>										5		6		7		8	B3
		5																	
	6																		
	7																		
	8																		
c.	1 circle is added	B1																	
d.	12 circles	B1																	
e.	$C = Y + 2$	B1	Accept any other valid method																
11.	a.	Correct plotting	B2	8	(-1e.e.o.o.)														

	b.	Correct plotting and labelling Correct joining	B1 B2		(-1e.e.o.o.)																					
	c.	(7, 0)	B1																							
	d.	Correct joining (5, 4)	B1 B1		For both																					
12.	a.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr><td></td><td></td><td></td></tr> <tr><td></td><td>+++</td><td></td></tr> <tr><td></td><td>+++</td><td>3</td></tr> <tr><td></td><td> </td><td>1</td></tr> <tr><td></td><td>++++</td><td>7</td></tr> <tr><td></td><td>+++</td><td>4</td></tr> <tr><td></td><td></td><td>5</td></tr> </tbody> </table>					+++			+++	3			1		++++	7		+++	4			5	B3	12	B1 for each 3 correct entries
	+++																									
	+++	3																								
		1																								
	++++	7																								
	+++	4																								
		5																								
	b.	pizza	B1																							
	c.	7 - 5 2	M1 B1																							
	d.	5 + 3 + 1 + 7 + 4 + 5 25	M1 A1																							
	e.	Correct labelling of x-axis Correct labelling of y-axis Correct drawing of bars	B1 B1 B2 f.t.		B1 for each 3 correct bars																					
13.	a.	Correct time marked on each clock	B1 B1	4																						
	b.	4:30 - 3:45 45 mins <i>o.e.</i>	M1 A1		Accept any other valid attempt																					
14.		$\hat{a} = 51^\circ$ Vertically opposite angles	B1 B1	6	Accept any other valid reasoning																					
		$\hat{b} = 51^\circ$ Alternate or Corresponding angles	B1 B1		Accept any other valid reasoning																					
		$\hat{c} = 38^\circ$ Corresponding angles	B1 B1		Accept any other valid reasoning																					