KULLEĠĠ SAN BENEDITTU

Boys Secondary School, Kirkop

HALF-YEARLY EXAMINATIONS – FEBRUARY 2014

FORM 2	**MATHEMATICS**	TIME: 30mins
	Levels 7–8	

Non Calculator Paper

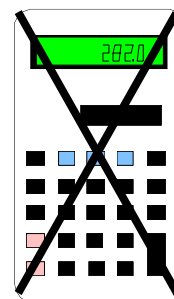| Question	1	2	3	4	5	6	7	8	9	10	11	Total
Max. Mark	2	2	2	2	2	3	2	2	2	2	4	25
Mark												

DO NOT WRITE ABOVE THIS LINE

NAME AND SURNAME: _____   CLASS:_____

INSTRUCTIONS TO CANDIDATES:

Read all the questions carefully before you start answering.

- Answer all questions.

- This paper carries 25 marks.

- **Calculators, protractors** and other mathematical instruments are **NOT ALLOWED.**

- On your desk you should have nothing except for **pen, pencil, ruler** and the **examination paper**.

1. Work out the H.C.F. of 84, 63 and 21.

Ans: _____

(2 marks)

2. Work out the following : $\sqrt{100} - 3^2$

Ans: _____

(2 marks)

3. One week a car dealer sold 50 cars. The following week he sold 12% **more**.

   (a) How many **more** cars did he sell in the second week?

Ans: _____

   (b) What was the amount of cars he sold **in the second week**?

Ans: _____

(2 marks)

4.   Draw the number that the LOGO turtle draws :

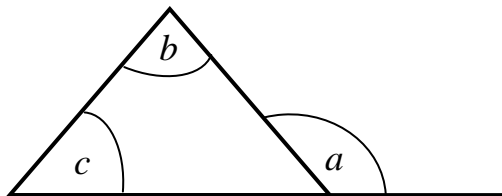   PD FD 80 LT 90 FD 30 LT 90 FD 30

(2 marks)

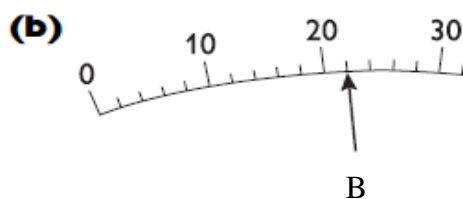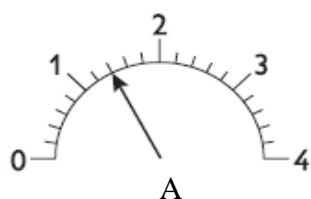5.   Find the value of $30 \times 24 - 12$

Ans: _____

(2 marks)

6.

       (a) Write down a formula for *a* in terms of *b* and *c*.

       (b) Work out the value of *a* if *b* = 60° and *c* = 50°

Ans: _____

(3 marks)

7.   Read the values of A and B on the following scales:

A

(b)

B

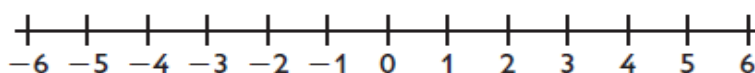Ans: A = _____

Ans: B = _____

(2 marks)

8.   Put these numbers in order, from smallest to largest:

$$\frac{3}{4} \ , \quad \frac{1}{3} \ , \quad \frac{1}{2} \ , \quad \frac{1}{5}$$

Ans: _____ _____ _____ _____

(2 marks)

9.   Mark $x \geq -4$ on the following number line.

(2 marks)

10.   Estimate : $\dfrac{39 \times 21.3}{1.956}$

Ans: _____

(2 marks)

11.   Find the **mean, mode, median** and **range** for the following set of numbers :

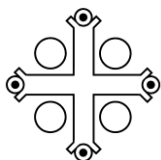2, 3, 0, 1, 4, 0, 1, 3, 2, 1, 0, 1.

Ans: (a) Mean =_____

(b) Mode = _____

(c) Median = _____

(d) Range = _____

(4 marks)

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HALF-YEARLY EXAMINATIONS – FEBRUARY 2014

FORM 2   **MATHEMATICS**   **TIME: 1 h 30mins**
Levels 7–8

Main Paper

Quest.	1	2	3	4	5	6	7	8	9	10	11	12	13	Main	NC	Global Mark
Max. Mark														75	25	100
Mark																

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NAME AND SURNAME: _____ CLASS:_____

INSTRUCTIONS TO CANDIDATES:

Read all the questions carefully before you start answering.

- Answer all questions.

- This paper carries 75 marks.

- Calculators and mathematical instruments are allowed but all necessary working must be shown.

1.   a) Write each of the following numbers as a product of their prime factors:
             15, 20 and 25.

Ans: 15 =_____

20 =_____

25 =_____

b) Three bells ring together at 6 a.m. If Bell A rings every 15 minutes, Bell B rings every 20 minutes and Bell C every 25 minutes , at what time will they next ring together?

Ans:_____

(5 marks)

2.   Use your calculator to work out the following:

a) $\left(\dfrac{2}{3}+\dfrac{1}{6}\right)\times\left(\dfrac{3}{4}-\dfrac{5}{8}\right)$

Ans:_____

b) $\sqrt{300\times 3}$ - 2^{3}

Ans:_____

c) $\dfrac{2}{7}\,of\,\text{€}350$
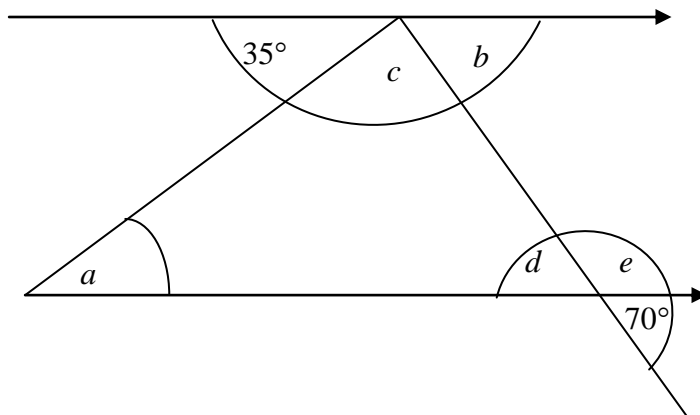
Ans:_____

(6 marks)

3.   Find the size of the marked angles and give reasons for your answers.

∠a = ____   Reason: _____

∠b = ____   Reason: _____

∠c = ____   Reason: _____

∠d = ____   Reason: _____

∠e = ____   Reason: _____

(10 marks)

4.   Match the three pairs of equivalent fractions

a) $\dfrac{3}{6}$ $\dfrac{15}{20}$

b) $\dfrac{75}{100}$ $\dfrac{5}{10}$

c) $\dfrac{3}{5}$ $\dfrac{12}{20}$

(3 marks)

5. Mariah covers a distance of 1500 m to go to school from home. She travels

$\frac{1}{4}$ of the distance on foot

$\frac{3}{5}$ of the distance by bus

and jogs the remaining distance to school.

a) How many metres **altogether** does Mariah travel on foot and by bus?

Ans:_____m

b) What **fraction** does she jog?

Ans:_____

c) How many metres does she jog?

Ans:_____m

(6 marks)

6.   The following are the heights in metres of a group of students in Form 4. The heights are given in order of size:

1.51	1.53	1.54	1.55	1.56
1.58	1.58	1.60	1.62	1.63
1.67	1.71	1.72	1.73	1.74
1.75	1.77	1.82	1.83	1.86

a) Complete the following table:

Height, m, metres	Frequency
$1.5 \leq h < 1.6$	7
$1.6 \leq h < 1.7$	
$1.7 \leq h < 1.8$	
$1.8 \leq h < 1.9$	
Total	

b) How many pupils are **shorter** than 1.7 m?

Ans:_____pupils

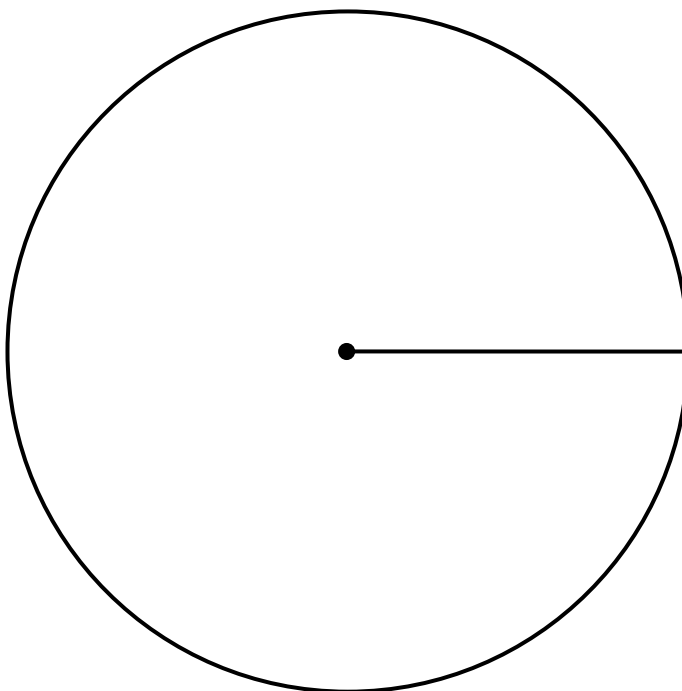c) How many pupils are **at least** 1.7 m tall?

Ans:_____pupils

(6 marks)

7. The following table shows the hours allocated for each subject during a particular week:

Subject	Maths	English	Science	History	P.E.
Hours	4 hours	5 hours	3 hours	2 hours	1 hour

a) Find the **total** number of hours.

Ans:_____hrs

b) Complete the pie chart below to represent this information:

(8 marks)

8. Arrange in ascending order:

a) 33%, $\frac{1}{2}$, 35%, 0.65, $\frac{1}{3}$

Ans:_____ _____ _____ _____ _____

b) Complete the following table:

Fraction	Decimal	Percentages
$\frac{3}{8}$		
	0.82	
		$2\frac{1}{4}$ %

(6 marks)

9. A shop reduces its prices by 10% in a sale.

a) What is the sale price of a shirt marked €85?

Ans: €_____

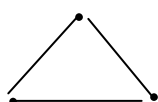b) Express 350 cm as a percentage of 5 m.

Ans:_____%

(5 marks)

10.   a) Expand: 3 (2x – 5)

Ans:_____

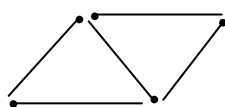b) Factorise fully: 15xy – 45z

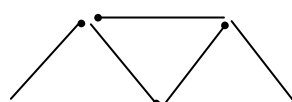Ans:_____

(4 marks)

11.   Victoria uses matches to form the following shapes:

Shape 1   Shape 2   Shape 3

a)   Draw the next shape

b)   Help Victoria fill the table below:

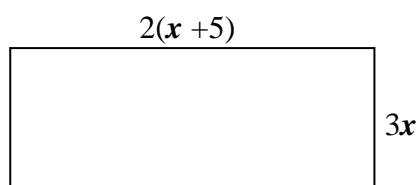| Shape Number	1	2	3	4	5
No. of Matchsticks	3	5			

c) Find the *n*th term.

Ans:_____

d) How many matchsticks does Victoria need for Shape 50?

Ans:_____

(8 marks)

12.

$$2(x + 5)$$

$3x$

a) Find an **expression** for the perimeter of the rectangle.

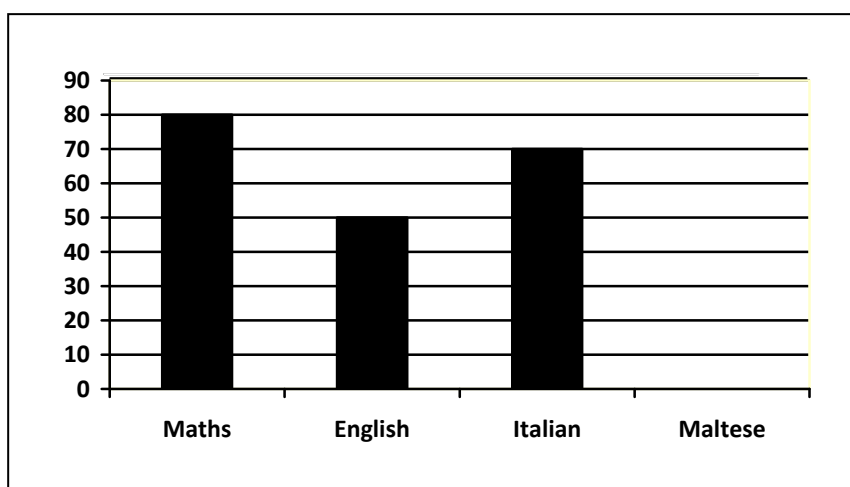Ans:_____

b) Find the perimeter when $x = 3\,cm$.

Ans:_____cm

(4 marks)

13. The following bar chart shows the results that John obtained in his annual exams.

a) What mark did he obtain in Maltese mark if his **average** mark was 65?

Ans:_____

b) Draw the bar for the Maltese mark in the bar chart.

(4 marks)

END OF EXAM