

# KULLEĠĠ SAN BENEDITTU Secondary School, Kirkop

Mark

HALF YEARLY EXAMINATION – 2014/2015

Levels 7 - 8

YEAR 7

MATHEMATICS

Time: 30 mins

Levels 7 – 8

*Non Calculator Paper*

Name: \_\_\_\_\_

Class: \_\_\_\_\_

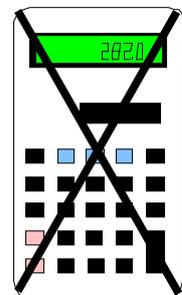
Question	1	2	3	4	5	6	7	TOTAL
Max. Mark	3	4	6	4	4	2	2	25
Mark								

DO NOT WRITE ABOVE THIS LINE

## 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**.



1. Evaluate the following:

(a)  $47 - 12 + 53 - 48$

(b)  $27.5 - 13 + 2.5$

Answer: \_\_\_\_\_

Answer: \_\_\_\_\_

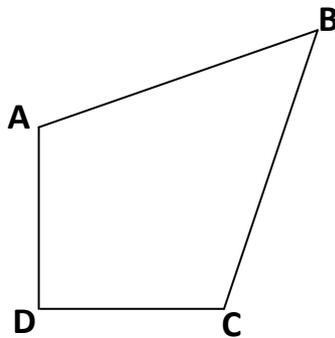
(c)  $27 \times 10^5$

Answer: \_\_\_\_\_

(3 marks)

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2. The diagram shows a quadrilateral ABCD, in which angle A is equal to angle C.



(a) **Fill in** : The angles in a quadrilateral add up to \_\_\_\_\_ .

(b) Angle  $ABC = 40^\circ$  and angle  $ADC = 90^\circ$ . What is the size of **angle BAD**?

$\angle BAD =$  \_\_\_\_\_

(4 marks)

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3. (a) Write 35% as a fraction in its **lowest terms**.

Answer: \_\_\_\_\_

(b) **Work out:**  $\frac{1}{3} + \frac{2}{5} - \frac{7}{30}$ . Give your answer in its **lowest terms**.

Answer: \_\_\_\_\_

(c) **Simplify** the ratio 54 : 81 .

Answer: \_\_\_\_\_

(6 marks)

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4. (a) Write the number 2347.314 correct to:

the **nearest 10** → \_\_\_\_\_

**one decimal place** → \_\_\_\_\_

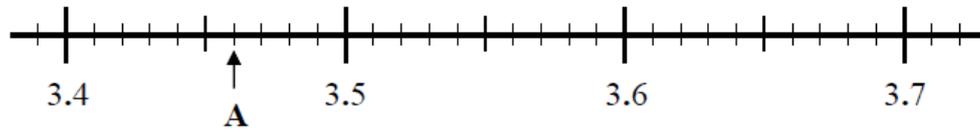
(b) Continue the following to give an **estimate** for:

$$\frac{19.6 + 4.4}{2.9} \approx \frac{\boxed{\phantom{00}} + \boxed{\phantom{00}}}{3} = \frac{\boxed{\phantom{00}}}{3} = \boxed{\phantom{00}}$$

(4 marks)

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5. Look at this scale:



(a) Write down the value of **A**.

**A** = \_\_\_\_\_

(b) Use an **arrow** to mark 3.62 as **B** on the scale above.

(c) Find the **sum** of the value of **A** and the value of **B**.

**Answer:** \_\_\_\_\_

(4 marks)

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6. Complete the patterns:

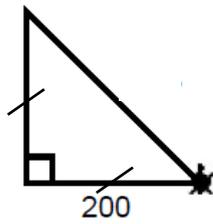
(a) 4, 7, 10, 13, \_\_\_\_\_, \_\_\_\_\_ .

(b) 32, 16, 8, 4, \_\_\_\_\_, \_\_\_\_\_ .

(2 marks)

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7. Complete the Logo programme which draws this isosceles triangle.



PD

LT 90

FD 200

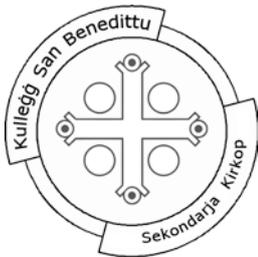
\_\_\_\_\_ 90

FD \_\_\_\_\_

HOME

(2 marks)

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# KULLEGG SAN BENEDITTU Secondary School, Kirkop

Mark
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**HALF YEARLY EXAMINATION – 2014/2015**

Levels 7 - 8
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**YEAR 7**

**MATHEMATICS  
Levels 7 – 8**

**Time: 1 hr 30 mins**

***Main Paper***

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Main	NC	Global Mark
<b>Max. Mark</b>	4	2	2	4	4	8	7	5	6	6	5	3	6	8	5	75	25	<b>100</b>
<b>Mark</b>																		

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**INSTRUCTIONS TO CANDIDATES**

- **Answer all questions.**
- **This paper carries 75 marks.**
- **Calculators and mathematical instruments are allowed but all necessary working must be shown.**

1. (a) Write in **figures**:

(i) twenty three thousand, five hundred and seven \_\_\_\_\_

(ii) two thousand, two hundred and one \_\_\_\_\_

(b) Find the **difference** between the two numbers above.

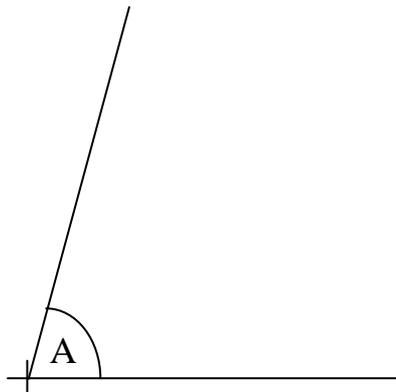
**Answer:** \_\_\_\_\_

(c) Write your answer to (b) in **words**.

\_\_\_\_\_  
\_\_\_\_\_

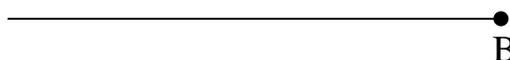
(4 marks)

2. (a) Use your protractor to **measure** angle A accurately.



$\angle A =$  \_\_\_\_\_

(b) Use your protractor to **draw** an angle of  $125^\circ$  at B. **Mark** the angle with an arc.



(2 marks)

3. Arrange the following, in **ascending** (smallest first) order of size:

0.074      74%       $\frac{3}{4}$       0.49

**Answer:** \_\_\_\_\_

(2 marks)

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4. Ramon buys his lunch from the tuck shop. He keeps a record of the amounts he spends:

€1.50, €2.00, €0.96, €1.79, €1.25.

(a) Work out the **range**.

**Answer:** € \_\_\_\_\_

(b) Find the **mean** amount spent.

**Answer:** € \_\_\_\_\_

(4 marks)

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5. (a) In a Form 1 class of 19 students, 12 students study Italian and the rest study German. Write the **ratio** of students **studying German** to the **total number** of students in class.

**Answer:** \_\_\_\_\_

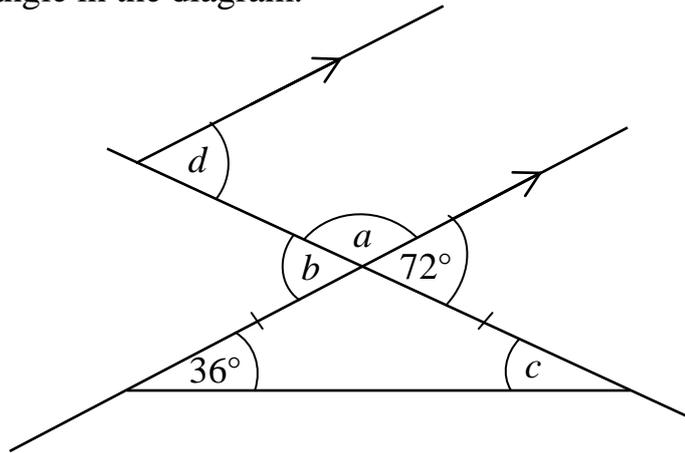
(b) On a school outing the ratio of teachers to students is 1 : 7.  
84 students go to the outing. How many **teachers** are there?

**Answer:** \_\_\_\_\_ **teachers**

(4 marks)

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6. Find the **value** of each lettered angle in the diagram.  
Give **reasons** for your answers.



- $a =$  \_\_\_\_\_ Reason: \_\_\_\_\_
- $b =$  \_\_\_\_\_ Reason: \_\_\_\_\_
- $c =$  \_\_\_\_\_ Reason: \_\_\_\_\_
- $d =$  \_\_\_\_\_ Reason: \_\_\_\_\_

(8 marks)

7. (a) State whether these statements are **true** or **false**:

126 is a multiple of 6. \_\_\_\_\_

$14^3$  is equal to 2744. \_\_\_\_\_

7 is a factor of 414. \_\_\_\_\_

90 is a common multiple of 8 and 12. \_\_\_\_\_

- (b) Express 588 as a product of its **prime factors**.  
Write your answer using **powers**.

**Answer:** \_\_\_\_\_

(7 marks)

8. (a) Write  $\frac{7}{9}$  as a **decimal**. Round your answer correct to **2 decimal places**.

**Answer:** \_\_\_\_\_

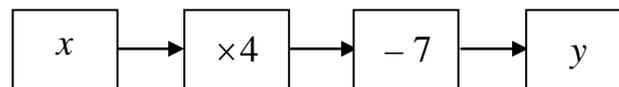
(b) Find the **sum** of (24% of 75) and  $\left(\frac{2}{3} \text{ of } 24\right)$ .

**Answer:** \_\_\_\_\_

(5 marks)

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9. The following diagram represents a **function machine**:



(a) What is the **output**  $y$ , when the input  $x$  is 3?

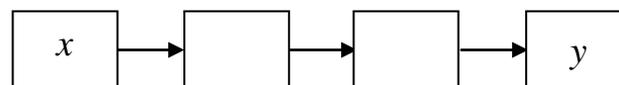
**Answer:** \_\_\_\_\_

(b) What is the **input**  $x$ , when the output  $y$  is 25?

**Answer:** \_\_\_\_\_

A new function machine is dividing the input by 3 and then subtracting 7.

(c) Fill in the **new** number machine below.



(d) Use this number machine to work out the **output**  $y$  when the input  $x$  is 21.

**Answer:** \_\_\_\_\_

(6 marks)

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**10.** Car hire costs €12.35 per day. Fiona hires a car for **21 days**.

(a) Use your calculator to work out **the total cost** of hiring the car.

**Answer:** € \_\_\_\_\_

(b) She receives a discount of 10%. How much **discount** will she get?

**Answer:** € \_\_\_\_\_

(c) How much does Fiona **pay**?

**Answer:** € \_\_\_\_\_

(6 marks)

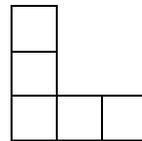
**11.** Look at the pattern below.



**pattern 1**



**pattern 2**



**pattern 3**

**pattern 4**

(a) **Draw** the fourth pattern.

(b) **Continue** this table.

Pattern no.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		<b>8</b>		
Number of squares	1	3							25

(c) Will there be a pattern with 50 squares? Why?

(5 marks)

12. Use your **calculator** to work out:

(a)  $23 \times 47 \div 25$

Answer: \_\_\_\_\_

(b)  $17^2 + \sqrt[3]{1331}$

Answer: \_\_\_\_\_

(3 marks)

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13. For her new flat, Ilona needs the following items:

3 mugs at €1.34 each  
1 kettle at €2.80  
4 tea towels at €1.87 each  
1 chopping board at €2.15

(a) Find the cost of the three **mugs**.

Answer: € \_\_\_\_\_

(b) Find the **total cost** of her shopping list.

Answer: € \_\_\_\_\_

(c) She pays for the items with a **€50** note. Work out the **change** given.

Answer: € \_\_\_\_\_

(6 marks)

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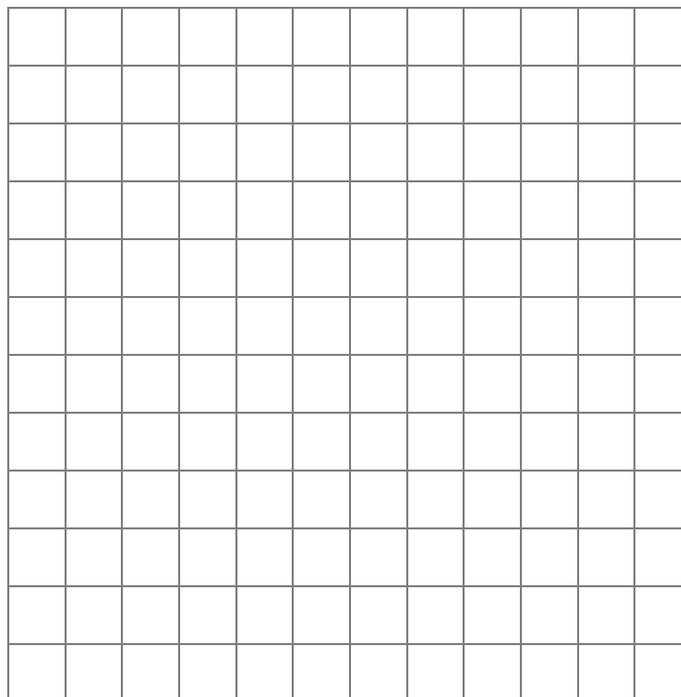
14. The table shows the age in years, to the nearest year, of people who attended an exhibition.

18	22	31	42	33	38
32	25	27	35	50	44
51	34	17	40	23	57
24	25	47	26	36	47
39	48	35	21	14	16

(a) Complete the **frequency table** to show this information.

Age in years	Tally	Frequency
11-20		
21-30		
31-40		10
41-50		
51-60		

(b) Draw the **bar chart** to show this data.



(c) How many persons were at least 31 years of age?

Answer: \_\_\_\_\_ persons  
(8 marks)

15. (a) **Plot** the following points and **label** each with its letter:

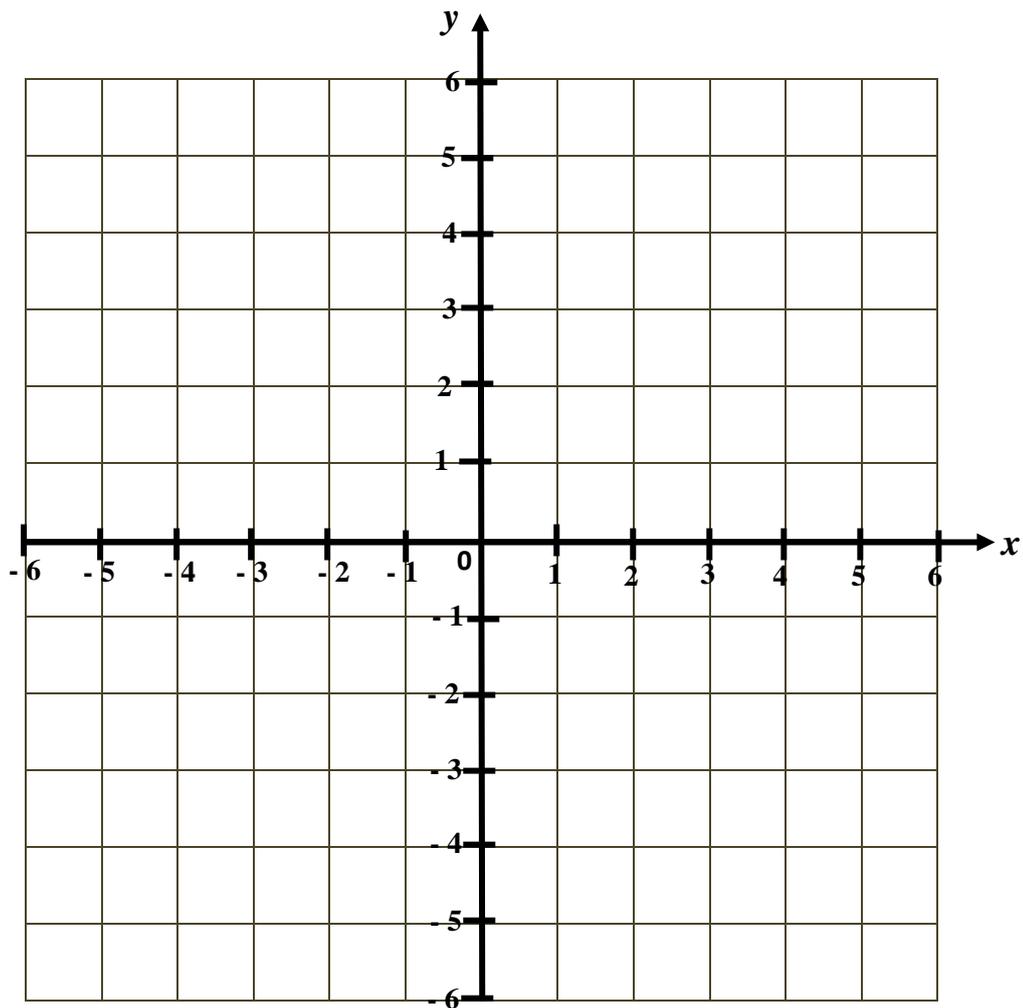
A(0, 4)

B(-4, -1)

C(-3, -3)

D(3, -3)

E(4, -1)



(b) **Join** A to B to C to D to E to B. **Join** also A to E.

(5 marks)

**END OF PAPER**