

# KULLEĠĠ SAN BENEDITTU Secondary School, Kirkop

Mark

HALF YEARLY EXAMINATION – 2014/2015

Level 7 – 8

YEAR 8

**MATHEMATICS** Level 7 - 8

TIME: 30 mins

## Non Calculator Paper

Question	1	2	3	4	5	6	NC
Max. Mark	4	2	5	5	4	5	25
Mark							

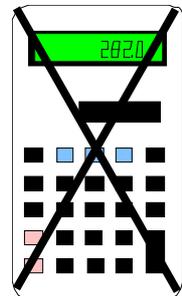
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NAME AND SURNAME: \_\_\_\_\_ CLASS: \_\_\_\_\_

### INSTRUCTIONS TO CANDIDATES:

Read all the questions carefully before you start answering.

- Answer all questions.
- This paper carries 25 marks.
- **Calculators, protractors** and other mathematical instruments are **NOT ALLOWED**.



**1. Work:**

a)  $1 - 2 + 3 - 4 + 5 - 6$

Ans: \_\_\_\_\_

b)  $\sqrt{64} + 2^3$

Ans: \_\_\_\_\_

c)  $2 + 4 \times (3 - 1)^2$

Ans: \_\_\_\_\_

(4 marks)

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**2. Estimate:**

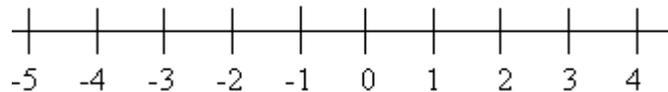
$$\frac{39.8 \times 9.9^2}{20.16}$$

Ans: \_\_\_\_\_

(2 marks)

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3. a) **Show** the inequality  $x \geq -2$  by drawing it on the number line below.



b) **Fill in** with  $>$ ,  $<$  or  $=$ .

i)  $\frac{1}{3}$  \_\_\_\_\_  $0.\dot{3}$

ii)  $-2$  \_\_\_\_\_  $-2.15$

iii)  $55\%$  \_\_\_\_\_  $\frac{9}{20}$

(5 marks)

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4. a) **Factorise completely**  $12y + 18$ .

Ans: \_\_\_\_\_

b) Find the value of  $h^2 - 5g$  when  $h = -7$  and  $g = 0.3$ .

Ans: \_\_\_\_\_

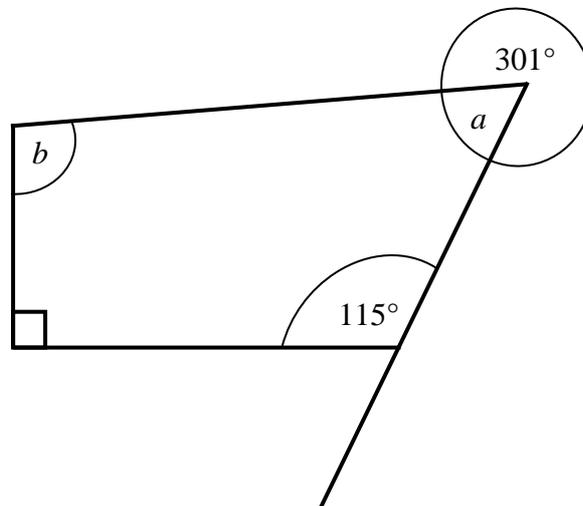
c) In a game, Mark asks his friend to think of a number, to **add 1** and then **double** the result. If  $k$  represents the unknown number, write Mark's instructions, using brackets.

Ans: \_\_\_\_\_

(5 marks)

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5. Find the missing angles.



$a =$  \_\_\_\_\_  $^{\circ}$  Reason = \_\_\_\_\_

$b =$  \_\_\_\_\_  $^{\circ}$  Reason = \_\_\_\_\_

(4 marks)

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6. **Work out**, giving your answer in simplest form:

a)  $2\frac{2}{3} + 1\frac{4}{5} =$

Ans: \_\_\_\_\_

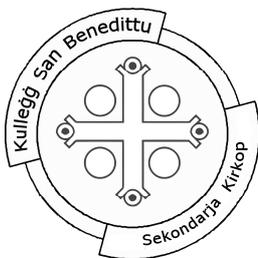
b)  $\frac{3}{8} \times \frac{4}{15} \div \frac{9}{10} =$

Ans: \_\_\_\_\_  
(5 marks)

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**END OF NON CALCULATOR PAPER**

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# KULLEGG SAN BENEDITTU Secondary School, Kirkop

Mark

HALF YEARLY EXAMINATION – 2014/2015

Level 7 – 8

YEAR 8

**MATHEMATICS** Level 7 - 8

TIME: 1 hr 30 mins

## Main Paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	Main	NC	Global Mark
Max Mark	4	7	4	3	6	4	8	6	3	5	11	8	6	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) Express 588 as the **product of its prime factors**. Give your answer **using powers**.

Ans: \_\_\_\_\_

b) 588 is **not** a square number.

Which prime number needs to be **multiplied** to 588 to make it a square number?

Ans: \_\_\_\_\_

(4 marks)

2. a) The list below shows some **factors** of 48. Fill in the missing factors.

1, 2, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 8, \_\_\_\_\_, 16, 24, 48

b) **Match:**

	•	1
The smallest prime number	•	• 27
Two multiples of 9	•	• 11
The lowest common multiple of 6 and 7	•	• 2
The highest common factor of 6 and 18	•	• 36
$\sqrt[3]{1331}$	•	• 6
		• 42

(7 marks)

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3. Write the following in order, **smallest** first.

$\frac{7}{15}$ ,  $4.7 \div 10$ ,  $\frac{5}{9}$ , 13.5%,  $\frac{1}{3}$

Ans: \_\_\_\_\_  
(4 marks)

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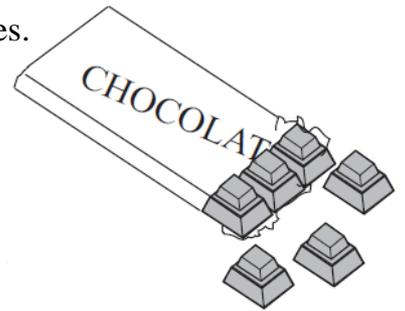
4. Use a **calculator** to work out  $\sqrt{13.456} + 4.52^3$ , giving your answer correct to 3 decimal places.

Ans: \_\_\_\_\_  
(3 marks)

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5. Pam buys a bar of chocolate. The bar is divided into 18 equal pieces.

- a) Pam eats **three** pieces of chocolate.  
What fraction of the bar has she eaten?  
Give your answer in its simplest form.



Ans: \_\_\_\_\_

- b) Later in the day, Pam eats  $\frac{3}{5}$  of the pieces that are **left**.  
How many pieces of chocolate has she eaten **altogether**?

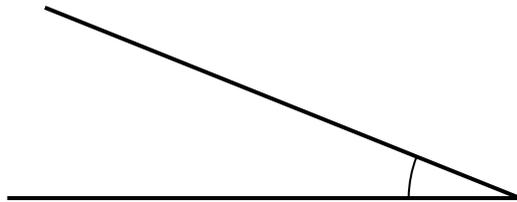
Ans: \_\_\_\_\_

- c) What **percentage** of the bar has **not been eaten**?  
Write your answer as a **recurring decimal**.

Ans: \_\_\_\_\_%  
(6 marks)

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6. a) Measure the angle with your protractor.



Ans: \_\_\_\_\_°

- b) i) **Draw** and **label** an angle of  $327^\circ$  in the space below.

ii) **Underline** the correct answer: The angle  $327^\circ$  is (acute, obtuse, reflex).

(4 marks)

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7.



ster

Amy's scores in **five** maths tests were 15, 16, 17, 16, 15.  
 Lewis's scores in **five** maths tests were 14, 17, 18, 19, 11.

a) Calculate the mean mark and range for Lewis and Amy.

Ans: Lewis: Mean \_\_\_\_\_ Range \_\_\_\_\_.  
 Amy: Mean \_\_\_\_\_ Range \_\_\_\_\_.

b) Is Lewis right or not? Explain.

\_\_\_\_\_

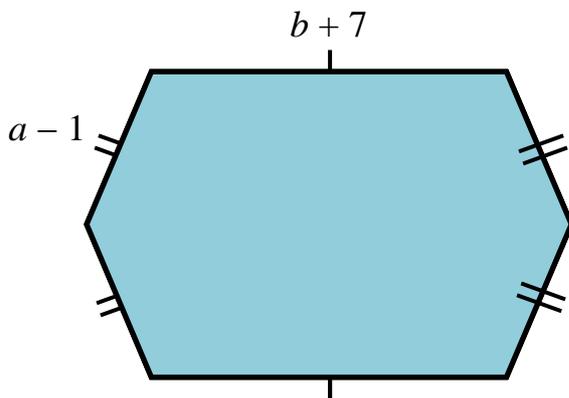
\_\_\_\_\_

(8 marks)

8. a) Multiply out the brackets and simplify:  $3 + 4(a + 6) - 2(1 - 2a)$

Ans: \_\_\_\_\_

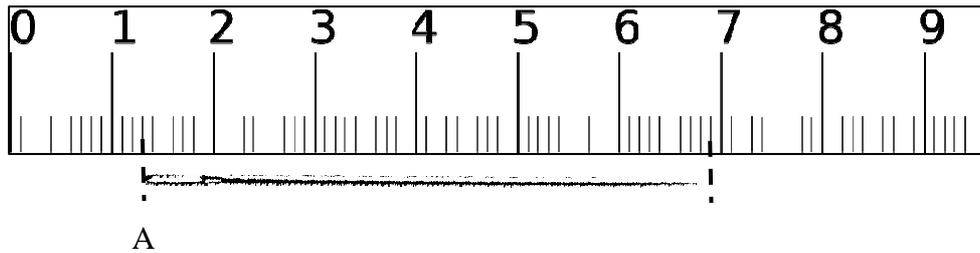
b) Find a formula for the **perimeter**,  $P$ , of this hexagon. Simplify your answer.



$P =$  \_\_\_\_\_

(6 marks)

9.



Some of the numbers on this ruler are missing.

a) What is the reading on the ruler at point A?

Ans: \_\_\_\_\_ cm

b) What is the length of the needle?

Ans: \_\_\_\_\_ cm  
(3 marks)

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10. The cost  $C$ , in euro, of hiring a car for  $d$  days can be calculated by using the formula  $C = 15d + 50$ .

a) Katia hires a car for **7 days**. What is the cost of hiring the car?

Ans: € \_\_\_\_\_

b) Katia travels a total distance of **475 km**.

Petrol costs €1.40c per litre and a car travels 25km with 1 litre of petrol.

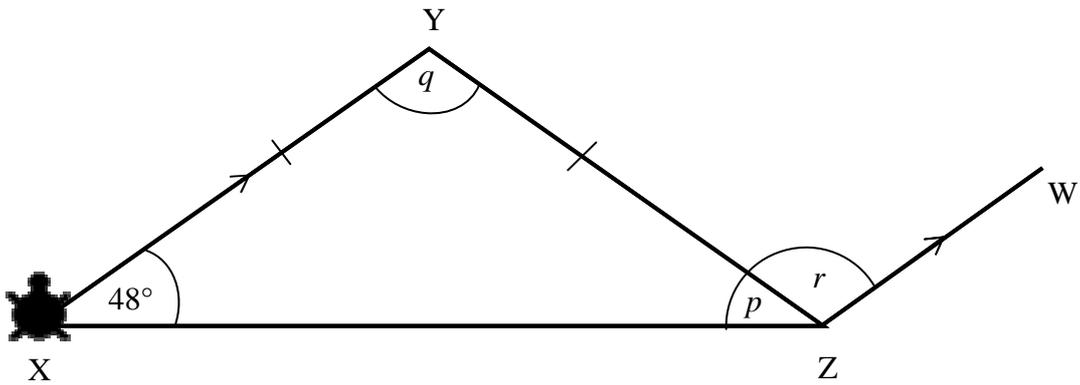
How much did Katia spend on petrol?

Ans: € \_\_\_\_\_  
(5 marks)

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12. In the diagram below,  $XY = ZY$  and  $XY$  is parallel to  $ZW$ .



a) Write down the size of angle  $p$ .

°  
 $p =$  \_\_\_\_\_

b) Calculate the size of angle  $q$ . Give a reason for your answer.

°  
 $q =$  \_\_\_\_\_ Reason = \_\_\_\_\_

c) Give a reason why angle  $q =$  angle  $r$ .

Reason = \_\_\_\_\_

d) *This question is about LOGO.*

On triangle XYZ, there is a turtle at point X **facing upwards**. If side XY is **80 turtle steps** long, fill in the missing commands so that the turtle draws triangle XYZ.

PD \_\_\_\_\_ 42 FD 80 RT \_\_\_\_\_ FD \_\_\_\_\_ HOME

(8 marks)

13. Carmen is eating at a restaurant with her friends.  
The cost of the food is €96.80. VAT at 18% must be added.

a) Calculate the VAT.



Ans: € \_\_\_\_\_

b) What is the total bill?

Ans: € \_\_\_\_\_

c) There is a discount of 5.5% on the total bill if Carmen pays cash.  
How much does Carmen pay if she pays cash?

Ans: € \_\_\_\_\_  
(6 marks)

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**END OF PAPER**

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