

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							

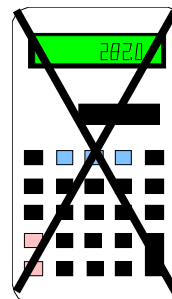
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NAME AND SURNAME: _____ CLASS: _____

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)

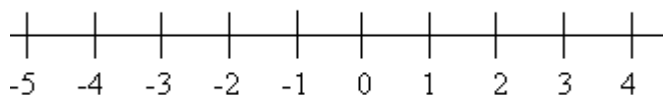
2. Estimate:

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

Ans: _____

(2 marks)

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)

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

Ans: _____

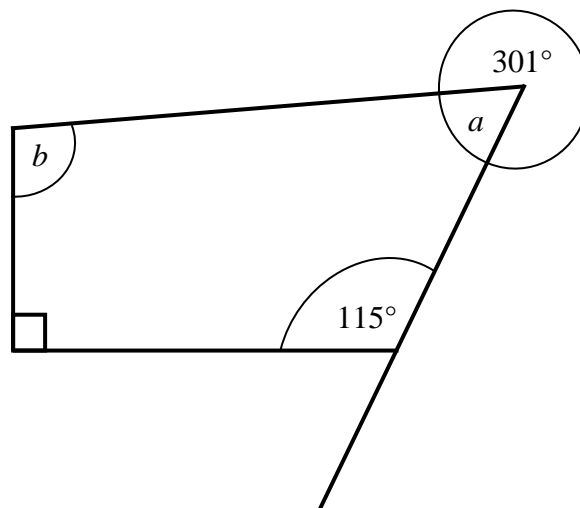
b) Find the value of $h^2 - 5g$ when $h = -7$ and $g = 0.3$.

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)

5. Find the missing angles.



$a =$ _____ $^\circ$ Reason = _____

$b =$ _____ $^\circ$ Reason = _____

(4 marks)

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

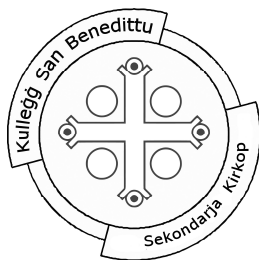
a) $2\frac{2}{3} + 1\frac{4}{5} =$

Ans: _____

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

Ans: _____
(5 marks)

END OF NON CALCULATOR PAPER



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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)

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)

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

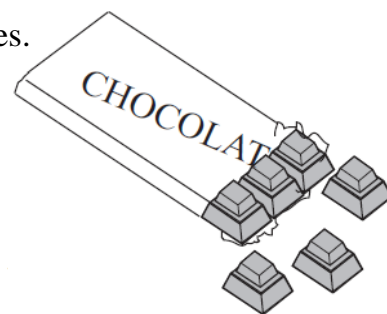
Ans: _____
(3 marks)

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: _____

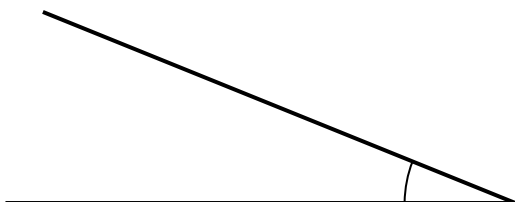
- c) What **percentage** of the bar has **not been eaten**?

Write your answer as a **recurring decimal**.

Ans: _____%

(6 marks)

-
6. a) Measure the angle with your protractor.



Ans: _____°

- b) i) **Draw** and **label** an angle of 327° in the space below.

ii) **Underline** the correct answer: The angle 327° is (acute, obtuse, reflex).

(4 marks)

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 _____.

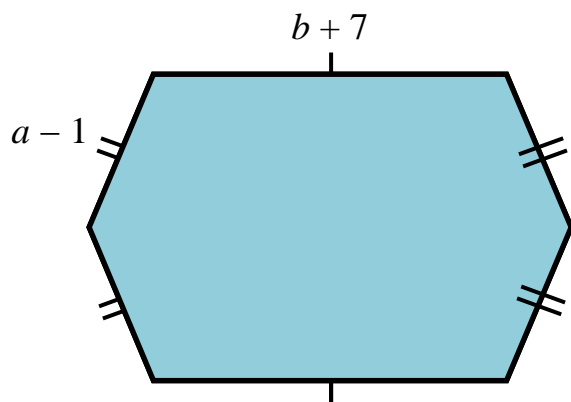
b) Is Lewis right or not? Explain.

(8 marks)

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

Ans: _____

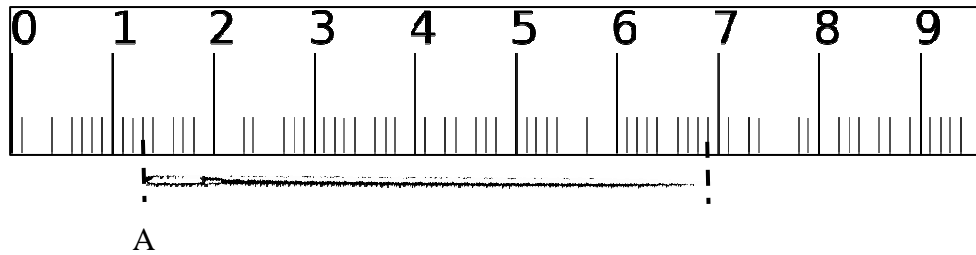
b) Find a formula for the **perimeter**, P , of this hexagon. Simplify your answer.



$P =$ _____

(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)

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: € _____

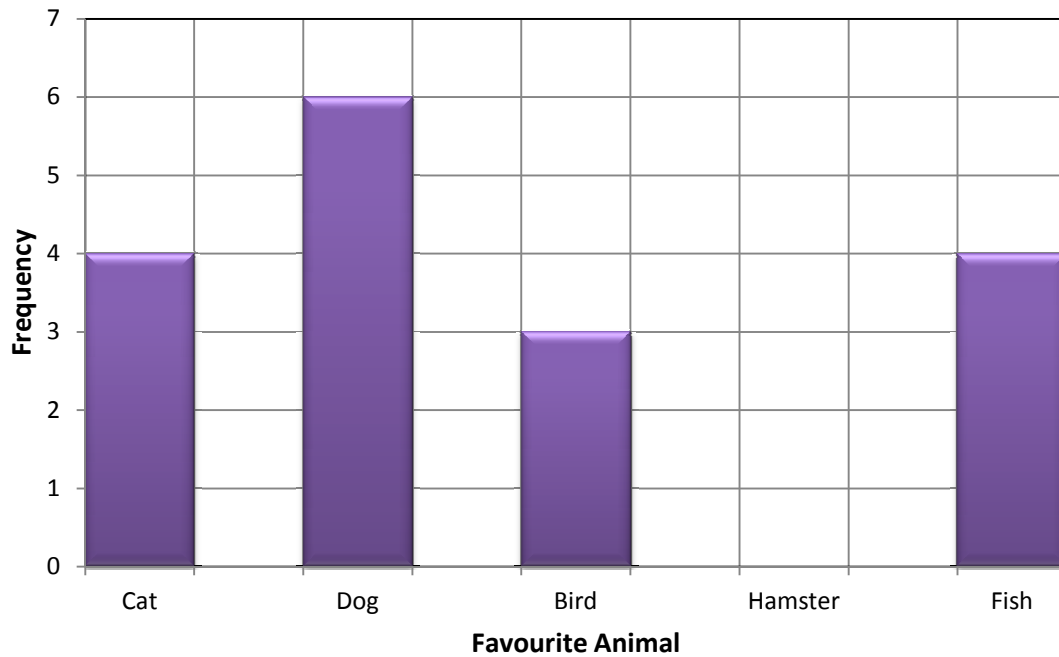
b) Katia travels a total distance of **475 km**.

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)

11. The bar chart below shows the favourite animals of a group of 20 students.



- a) The number of students who chose the hamster is missing. Draw the missing bar to show how many students chose this animal as their favourite.
- b) Which animal is chosen most? Ans: _____
- c) i) Construct a circle of radius 4.5 cm in the space provided below.
- ii) By finding suitable angles, **draw** and **label** a pie chart to show the information given in the bar chart above.

(11 marks)

- $p =$ _____

- $q =$ _____ Reason = _____

- Reason = _____

- 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)

END OF PAPER
