

KULLEĠĠ SAN BENEDITTU
Boys Secondary School, Kirkop

Levels
6-7

HALF-YEARLY EXAMS SCHOLASTIC YEAR 2012/2013

FORM2

MATHEMATICS Levels 6 - 7

TIME: 30 mins

Non Calculator Paper

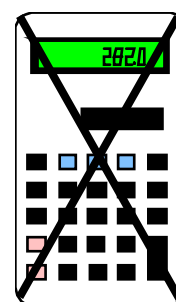
Question	1	2	3	4	5	6	7	8	9	10	Total
Max. Mark	1	3	2	2	2	5	2	3	3	2	25
Mark											

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



1. Work out : $\frac{(21 + 15)}{(19 - 10)}$

Answer _____

(1 mark)

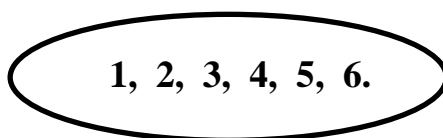
2. (a) Write 3 **multiples** of 7 between 25 and 45.

Answer _____

(b) Write 3 **factors** of 24.

Answer _____

(c)

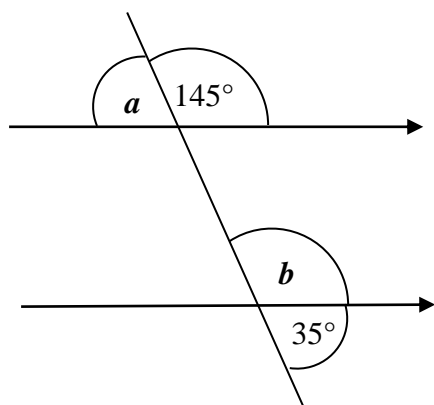


Choose the **prime numbers** from the oval.

Answer _____

(3 marks)

3. Find angles **a** and **b** and give a reason for your answer.



Angle **a** = _____ Reason: _____

Angle **b** = _____ Reason: _____

(2 marks)

4. Which of the following fractions are equivalent to $\frac{1}{4}$?

$$\frac{25}{100} \quad , \quad \frac{24}{36} \quad , \quad \frac{2}{8}$$

Answer _____

(2 marks)

5. These are the prices of some stamps.

$$53c \quad , \quad 64c \quad , \quad 63c \quad , \quad 60c \quad , \quad 35c$$

- (a) What is the **median** price ?



Answer _____

- (b) What is the **range**?

Answer _____

(2 marks)

6. (a) Complete this table:

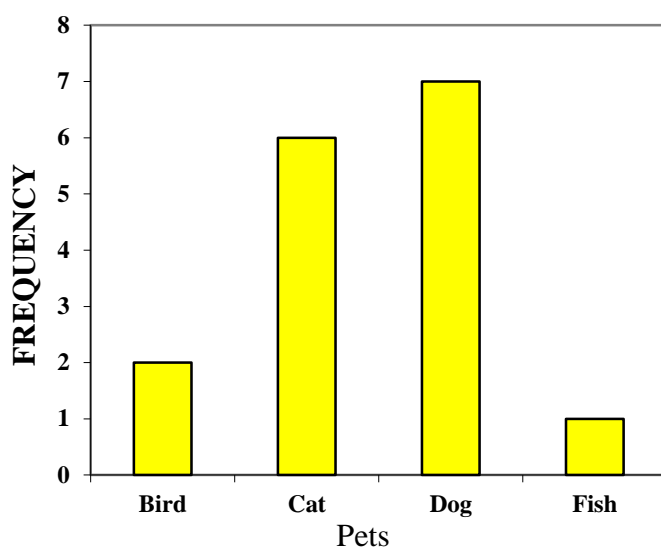
Fraction	Decimal
$\frac{1}{2}$	
	0.75
$\frac{3}{100}$	

- (b) Estimate: $\frac{83 \times 45}{5} \approx$

Answer _____

(5 marks)

7. A survey was done amongst some Form 2 students. Students were asked what pet they had. The following bar chart shows the result.



- (a) Complete the frequency table

Pets	Bird	Cat	Dog	Fish
Frequency	2	6		

- (b) How many students took part in this survey?

Answer _____

(2 marks)

8. Fill in :

$$\boxed{} + \boxed{-3} = \boxed{-10}$$

$$\boxed{6} \times \boxed{-2} = \boxed{}$$

$$\boxed{-18} \div \boxed{} = \boxed{3}$$

(3 marks)

9. Put one of these symbols $>$, $=$, $<$.

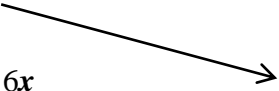
(a) 50% $\frac{1}{2}$

(b) 75% $\frac{1}{4}$

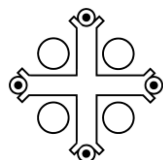
(c) 90% 1

(3 marks)

10. Match these expressions. The first one is done for you.

(a) $9(x - 3)$		(e) $3(5 - x)$
(b) $3x + 2 + 6x$	(f) $9x - 27$	
(c) $5(2x + 1)$	(g) $9x + 2$	
(d) $15 - 3x$	(h) $10x + 5$	

(2 marks)



KULLEGĠ SAN BENEDITTU
Boys Secondary School, Kirkop

Levels
6-7

HALF-YEARLY EXAMINATIONS – FEBRUARY 2013

FORM 2

MATHEMATICS Level 6 -7

TIME: 1hr 30 mins

Main paper

Question	1	2	3	4	5	6	7	8	9	10	11	12	Main	NC	Global Mark
Max. Mark	2	4	4	8	9	4	6	6	7	4	14	7	75	25	100
Mark															

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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. Express 784 as a product of its **prime** factors.
Give your answer in **index** form.

Answer : _____

(4 marks)

2. Two strings, **240 cm** and **350 cm** long, are to be cut into equal lengths.
Work out the largest possible length of each piece?

Answer : _____

(4 marks)

3. Use your calculator to evaluate:

a) $3.5^2 + 12.35$

Answer : _____

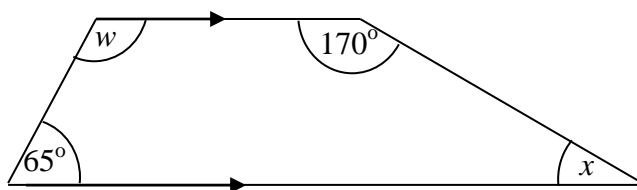
b) $\sqrt{441} - 3$

Answer : _____

(4 marks)

4. Find the lettered angles and give reasons for your answer.

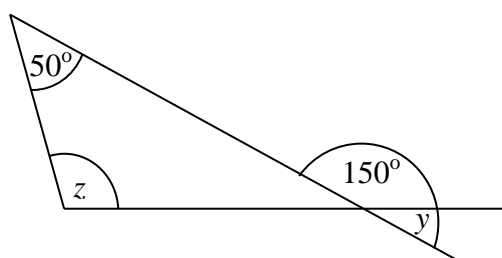
a)



$w =$ _____ Reason: _____

$x =$ _____ Reason: _____

b)



$y =$ _____ Reason: _____

$z =$ _____ Reason: _____

(8 marks)

5. a) My bag contains 2 books **each** weighing $\frac{3}{7}$ kg and 1 folder weighing $\frac{5}{21}$ kg. What is the **total weight** in my bag?
Give your answer in kilograms, correct to 1 decimal place.



Answer : _____ kg

- b) Put these fractions in ascending order.

$$\frac{9}{16}, \quad \frac{3}{4}, \quad \frac{5}{8}, \quad \frac{17}{32}$$

_____, _____, _____, _____.

(9 marks)

6. a) I have €75 and have to pay a bill of €125.
How much **more** money do I need to pay the bill?

Answer : _____

- b) The temperature outdoors is -6°C and indoors it is 18°C **more**.
What is the temperature inside?



Answer : _____

(4 marks)

7. In a sale, a shop gives **20% discount**.

Work out **the sale price** of:

- a) a shirt that costs €32



Answer : _____

- b) a pair of shoes that costs €40.



Answer : _____

(6 marks)

8. Use the formula $y = mx + c$ to find the value of y when:

a) $m = -3$, $x = 2$, $c = 4$

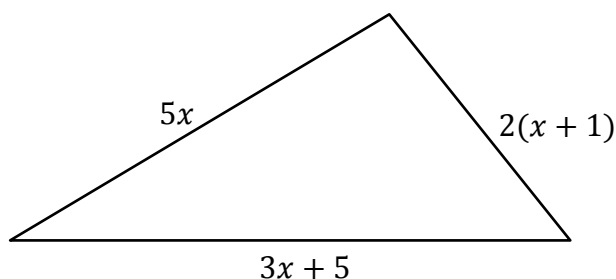
Answer : _____

b) $m = 6$, $x = -4$, $c = -2$

Answer : _____

(6 marks)

9. All the sides of this triangle are measured in centimetres.



a) Write an expression in x for the total length of the sides of this triangle.
Simplify your answer.

Answer : _____

b) The total length of the sides of this triangle is 27 cm.
Form an equation to express this fact.

Answer : _____

c) Solve the equation to find x .

Answer : _____

(7 marks)

10. Write down the next 2 terms for each of these sequences:

a) 4, 7, 10, 13, _____, _____.

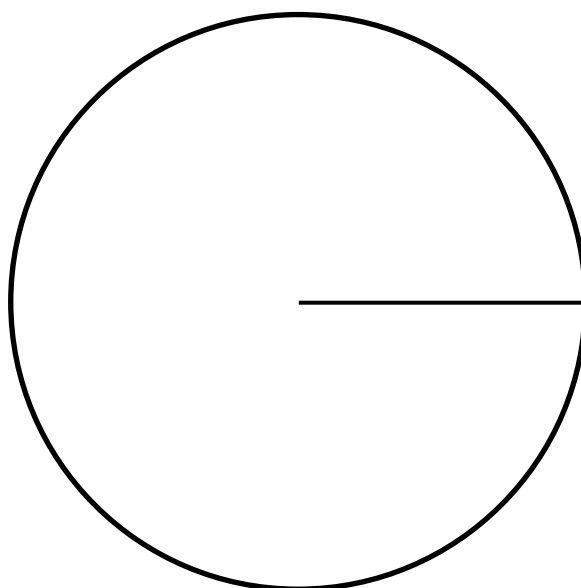
b) 27, 22, 17, 12, _____, _____.

(4 marks)

11. Complete the table showing how Lucy spends her day.

Activity	Time	Angles in Pie Chart
Sleeping	8 hours	
Reading	3 hours	
At school	6 hours	
Watching TV	4 hours	
Doing sports	3 hours	
<i>Total</i>	<i>24 hours</i>	<i>360°</i>

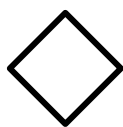
Draw and label a pie chart to represent this information.



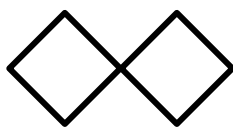
(14 marks)

12. This pattern is made using straws.

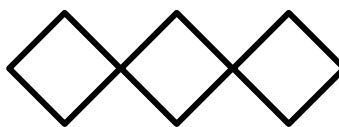
a) Draw the **Pattern 4**.



Pattern 1



Pattern 2



Pattern 3

Pattern 4

b) Complete the table below:

Pattern number	1	2	3	4	5	...	9
Number of straws	4	8	12			...	

c) Complete **the rule in words** for this pattern:

_____ to the previous number.

(7 marks)

END OF PAPER