

**KULLEĠĠ SAN BENEDITTU**  
**Boys Secondary School, Kirkop**



**HALF-YEARLY EXAMINATIONS – FEBRUARY 2014**

**FORM 4**

**MATHEMATICS** Scheme C **TIME: 1hr 40mins**

**Main Paper**

Question	1	2	3	4	5	6	7	8	9	10	11	12	Main	NC	Global Mark
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 80 marks.
- Calculators and mathematical instruments are allowed but all necessary working must be shown.

1. Use your calculator to work out:

a)  $7.3 \times (9.2 + 1.4)$  Answer: \_\_\_\_\_

b)  $\frac{3.7+2.45}{5}$  Answer: \_\_\_\_\_

c)  $3.7 + \frac{2.45}{5}$  Answer: \_\_\_\_\_

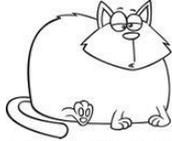
(3 marks)

2. a) Put these numbers in order smallest first:

10352, 1986, 9805, 10400

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

b) The heaviest recorded cat weighed **21.3 kg**. Round this to the **nearest kg**.



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

c) The distance from Malta to Rome is **686 km**. Round this to **1 significant figure**.

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

d) Mount Everest is **8848 m** above sea level. Round this height to the:

i) nearest **ten**: \_\_\_\_\_ m

ii) nearest **hundred**: \_\_\_\_\_ m

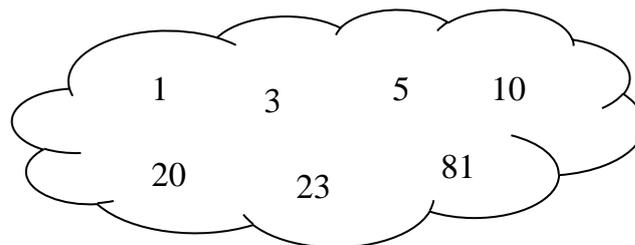
iii) nearest **thousand**: \_\_\_\_\_ m



(7 marks)

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3. Fill in using numbers from the cloud. Numbers can be used more than once.



a) \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ are **prime** numbers.

b) \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ are **factors of 10**.

c) \_\_\_\_\_ and \_\_\_\_\_ are **square** numbers.

d) \_\_\_\_\_ is a **common multiple** of 4 and 5.

(7 marks)

4. a) Fill in: A **regular** triangle is called an \_\_\_\_\_ triangle.

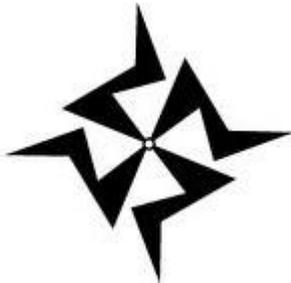
b) Draw a triangle which has **no symmetry** at all.

c) Which shape is being described?

**“ I have 4 sides. My opposite sides are parallel and equal. I have no lines of symmetry. I have rotational symmetry order 2.”**

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

d)



This shape has \_\_\_\_\_ **lines of symmetry** and **rotational symmetry** order \_\_\_\_\_.

(5 marks)

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5. a) Fill in: i) 2.3 km = \_\_\_\_\_ m

ii)  $\frac{1}{2}$  kg = \_\_\_\_\_ g

iii) 4000 ml = \_\_\_\_\_ litres

b) A cat weighs 3200 g and a dog weighs 5.2 kg.  
Find the total weight of the cat and the dog **in kg**.



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

c) Mark is 1.68 m tall. He is 15 cm taller than Nicole. Find Nicole's height **in cm**.

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

(7 marks)

6. Fill in the missing numbers:

a)  $5 \times \square = -35$

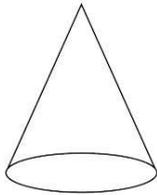
b)  $\square - 9 = -3$

c)  $22.5 \times \square = 315$

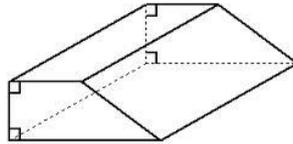
(3 marks)

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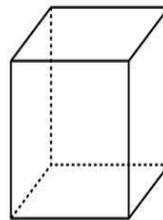
7. a) Which of the following shapes are **prisms**?



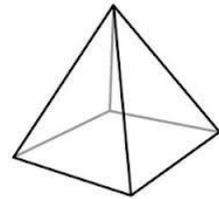
**A**



**B**



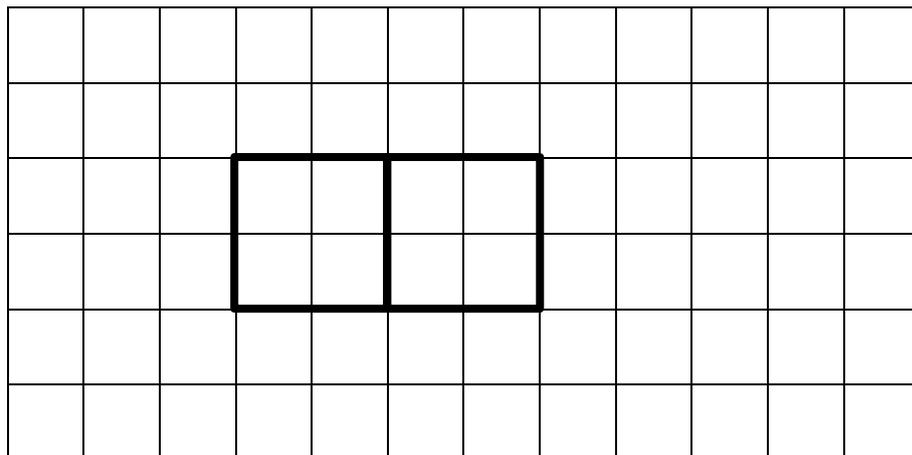
**C**



**D**

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

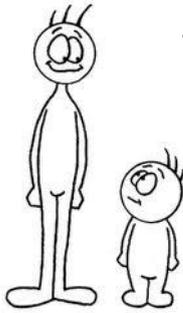
b) Continue this net to make a **net of a cube**.



(4 marks)

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8.



a) **Estimate** the height of the child given that the man is 180 cm tall.

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

b) In order to enter a playroom a child has to be **shorter** than 1.2 m. Only two of these children can enter. Who are they?

Luca: 1.17 m

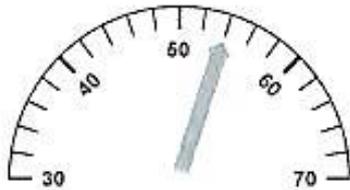
Andre: 1.4 m

James: 1.32 m

Noel: 95 cm

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

c)

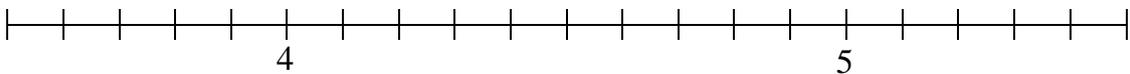


Read the value indicated by the arrow.

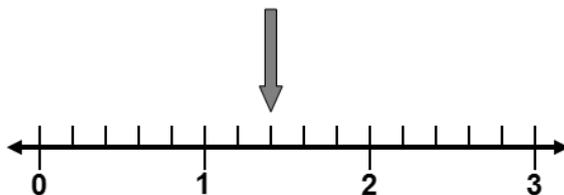
Answer: \_\_\_\_\_

d) Mark the following numbers with an arrow on the number line below:

**A:** 4.6    **B:** 3.8



e) Read the value marked with an arrow on the number line below:



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

(8 marks)

9. This data shows the lowest temperature on a day in February in 5 different cities:

City	Temperature
Valletta	9°C
Moscow	-12°C
Rome	2°C
London	-4°C
Oslo	-9°C



a) Give the name of **two** cities which were **warmer** than London.

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

b) Which city is the **coldest**?

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

c) What is the **difference** in temperature between London and Rome?

Answer: \_\_\_\_\_°C

d) Put the temperatures in order, **coldest first**:

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

e) Find the **median** temperature.

Answer: \_\_\_\_\_°C

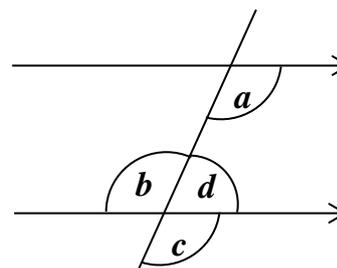
(8 marks)

10. a) Fill in using the letters in the diagram:

i) **a** and \_\_\_\_\_ are **alternate** angles

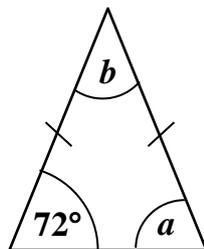
ii) **a** and \_\_\_\_\_ are **corresponding** angles

iii) **c** + \_\_\_\_\_ = 180°



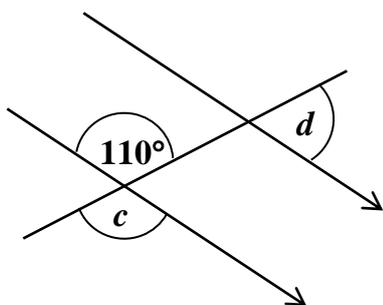
10. b) Find the missing angles:

i)



Answer:  $a = \text{_____}^\circ$ ,  $b = \text{_____}^\circ$

ii)



Answer:  $c = \text{_____}^\circ$ ,  $d = \text{_____}^\circ$

(9 marks)

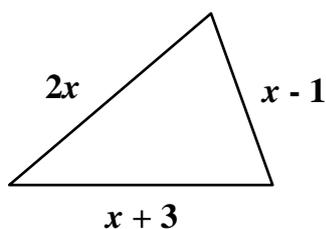
11. a) What is the value of each expression when  $a = 6$ ?

i)  $4(a - 1)$

ii)  $\frac{a}{2} + 7$

Answer: i) \_\_\_\_\_, ii) \_\_\_\_\_

b) Each expression in the diagram represents the length of a side in cm.



i) Work out the length of each side when  $x = 5$ .

Answer: \_\_\_\_\_ cm, \_\_\_\_\_ cm, \_\_\_\_\_ cm

ii) What is the perimeter of the triangle when  $x = 5$ ?

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

11. c) The number of points a football team has is worked out using the formula:

$$\text{Number of points} = 3 \times \text{number of wins} + \text{number of draws}$$



Last season Barcelona FC had 32 wins and 4 draws.

Work out the number of points they got.

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

(11 marks)

12. George conducted a survey about the age, in years, of the first 30 persons who entered a park one morning. The following are the results:

28, 29, 5, 66, 4, 13, 39, 7, 25, 3, 9, 15, 63, 67, 20

24, 8, 11, 42, 45, 61, 13, 9, 4, 47, 49, 21, 18, 5, 6

a) Complete the frequency table for his results:

Age, in years	Tally	Frequency
1 – 10		
11 – 20		
21 – 30		
31 – 40		
41 – 50		
51 – 60		
61 – 70		



b) How many persons were older than 10 years but younger than 31 years?

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

c) What is the most common age group?

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

d) From the results, do you think this was a school day or was this during the weekend? Give a reason.

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

(8 marks)