

KULLEĠĠ SAN BENEDITTU
Boys Secondary School, Kirkop

C

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: _____

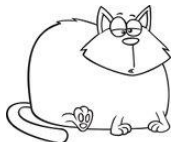
(3 marks)

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

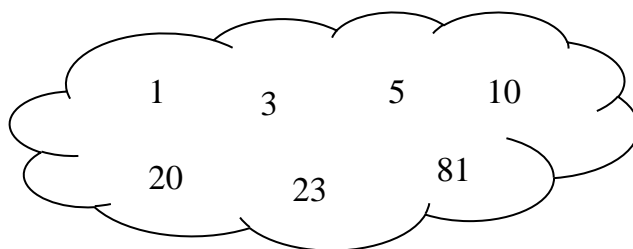
ii) nearest **hundred**: _____ m

iii) nearest **thousand**: _____ m



(7 marks)

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)

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:

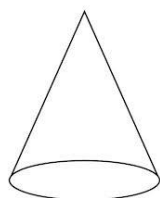
a) $5 \times \boxed{} = -35$

b) $\boxed{} - 9 = -3$

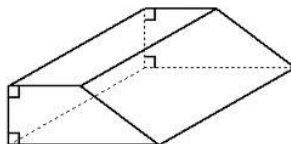
c) $22.5 \times \boxed{} = 315$

(3 marks)

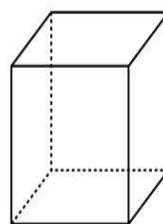
7. a) Which of the following shapes are **prisms**?



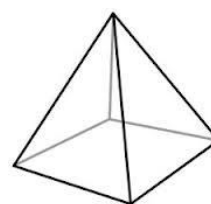
A



B



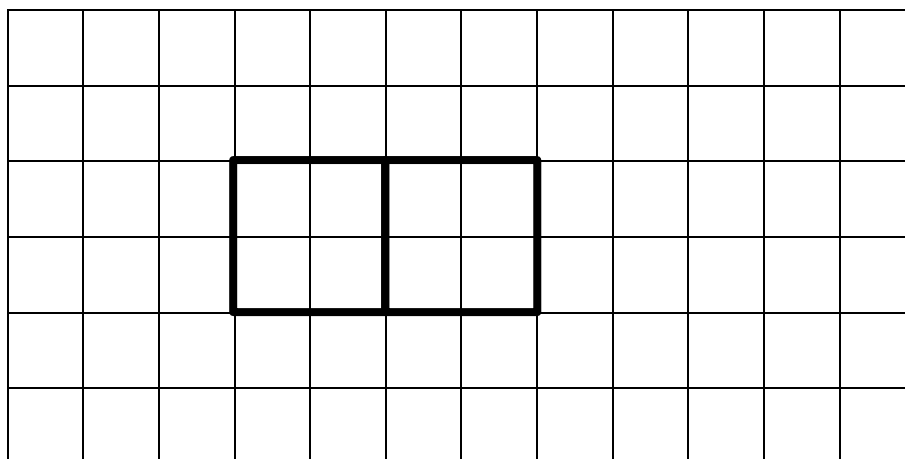
C



D

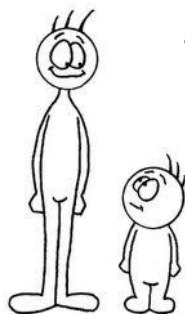
Answer: _____ and _____

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



(4 marks)

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)

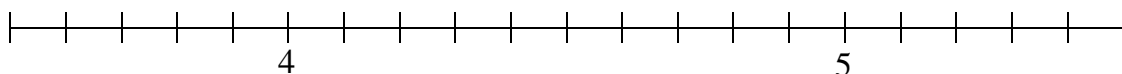


Read the value indicated by the arrow.

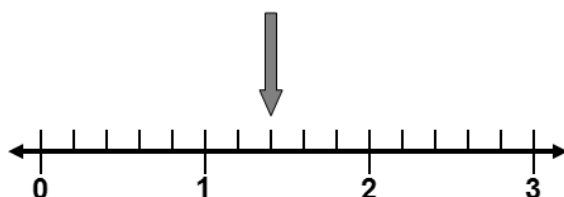
Answer: _____

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

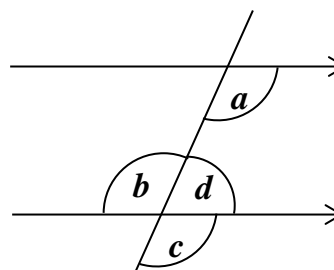
(8 marks)

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

i) **a** and _____ are **alternate** angles

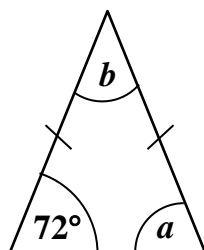
ii) **a** and _____ are **corresponding** angles

iii) **c** + _____ = 180°



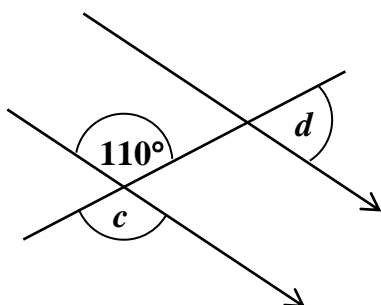
10. b) Find the missing angles:

i)



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

ii)



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

(9 marks)

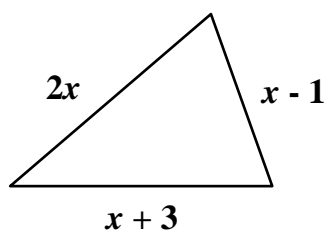
11. a) What is the value of each expression when $a = 6$?

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)