KULLEĠĠ SAN BENEDITTU

Boys Secondary School, Kirkop

D

HALF-YEARLY EXAMINATIONS – FEBRUARY 2014

FORM 4   **MATHEMATICS** Scheme D   **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:_____

<u>INSTRUCTIONS TO CANDIDATES</u>:

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. Are the following statements **True** or **False**?

    a) 1 is a **cube** number.   _____

    b) 36 is a **square** number.   _____

    (2 marks)

2. Tom has the following answer on the calculator:

$$1682.5432$$

a) This number correct to the **nearest 100** is _____ .

b) This number correct to **one decimal place** is _____ .

c) This number correct to **three decimal places** is _____ .

d) This number correct to the **nearest 10** is _____ .

e) This number correct to the **nearest 1000** is _____ .

(5 marks)

_____

3. a) **Work out** the following:

435 − 234 + 657 = _____

b) Two of the following numbers lie **between** $\frac{1}{5}$ and $\frac{9}{10}$

$2\frac{1}{2}$ $\frac{3}{4}$ 1 $\frac{4}{5}$

The numbers are _____ and _____ .

(4 marks)

_____

4. a) Fill in the spaces

      i.   2 litres = _____ ml

      ii.   1900 ml = _____ litres

      iii.   _____ m = 10 cm

      iv.   5 m = _____ mm

b) Match the following to their unit.

Fuel in a car	Kg
The mass of a mouse	Gram
The length of your thumb	Metre
Your mass	litre
The length of a playing field	cm
The medicine on a teaspoon	ml

(8 marks)

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5. Fill in using the numbers below:

−4   **−2**   **−7**   **−5**   **2**   **8**

a) _____ + 2 = 0   c) $2 \times$ _____ $= -14$

b) _____ ÷ −4 = −2   d) _____ + − 2 = −7

(4 marks)

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6. a) Shade $\frac{3}{5}$ of the shape.
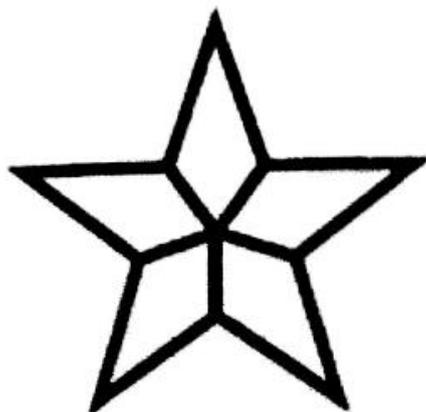
b) Write as an equivalent fraction.

$$\frac{3}{5} = \frac{\Box}{15}$$

c) Work out

$$\frac{3}{5} - \frac{2}{15} =$$

Ans : _____

(4 marks)

7) a) John buys some tools for his garden.

€23.99

€16.25

€17.99
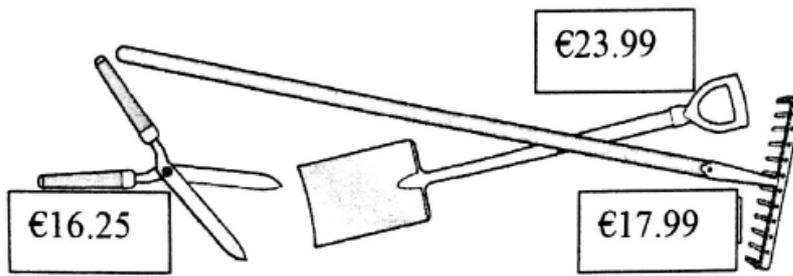
How much does he spend altogether?

Ans : €_____

b) Here is a greengrocer's bill.
   i) Complete it.

3 lemons at 21c each	
4 grapefruit at 35c each	
1.5 kg potatoes at €0.96 a kg	
TOTAL	€_____

ii) What **change** does he get if he pays with a €20 note?

Ans : €_____

(9 marks)

8) In a Form 4 class:

10% of the pupils have a dog.
40% of the pupils have a cat.
The rest have a fish.

a) What is the percentage of pupils who do not have a dog?

Ans : _____

b) In this class there are 20 pupils.
   Work out how many pupils have a fish.

Ans : _____

(5 marks)

___

9) Join each triangle to its correct name.
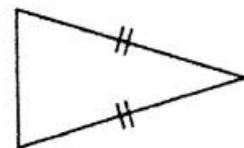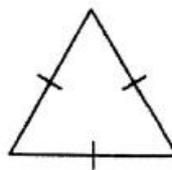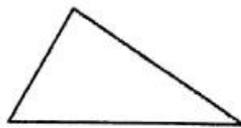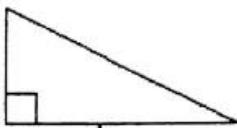
Scalene triangle	Isosceles triangle	Right-angled triangle	Equilateral triangle

(2 marks)

___

10) a) Find the **area** of the rectangle and triangle:

5.8 cm

10.6 cm

5.8 cm

5.8 cm

5.8 cm
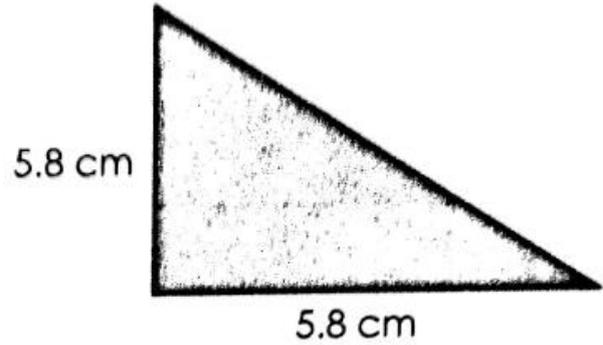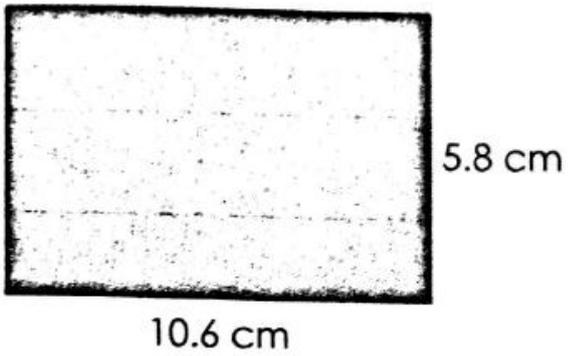
Answer_____cm^2 Answer_____cm^2

b) The rectangle and triangle are joined together to form this shape:
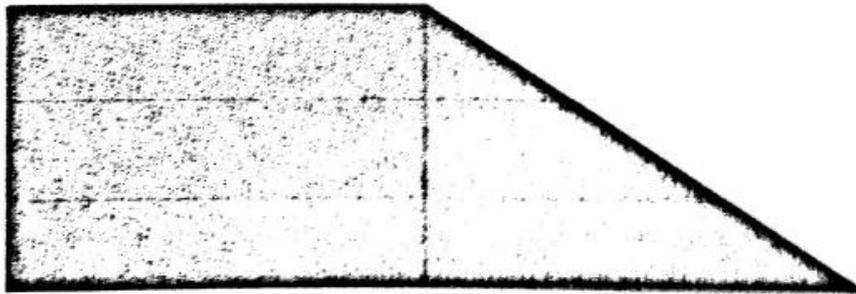
Find the **total area** of this shape:

Answer: _____cm^2

c) Find the **volume** of the cuboid:

16 cm

8 cm

5 cm
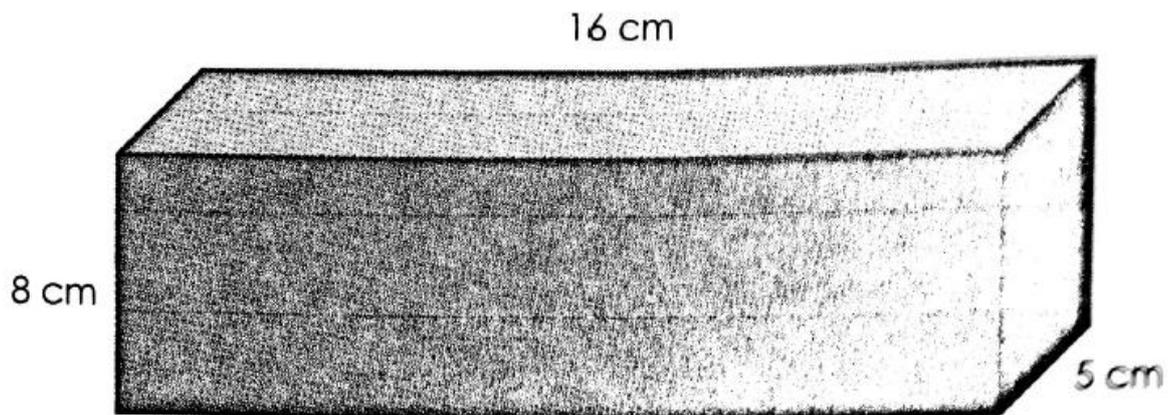
Answer: _____ cm³

(8 marks)

11) Tesselate this shape two more times.
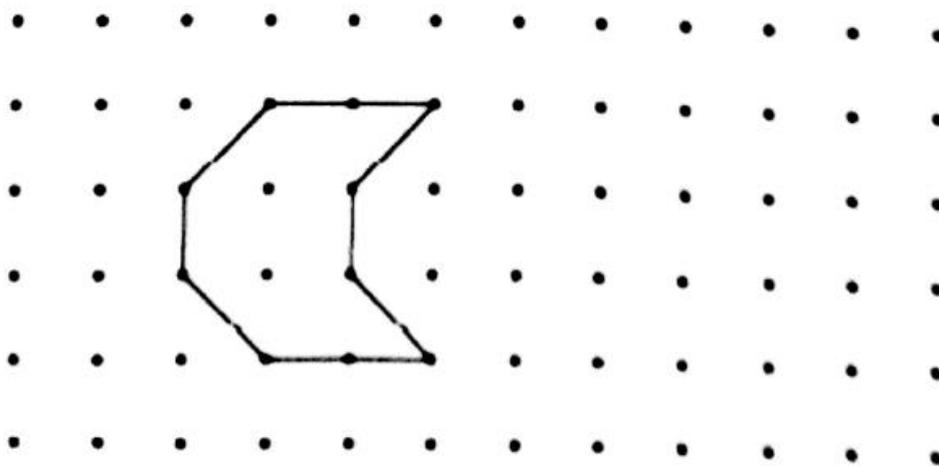
(3 marks)

12) Carla takes **five** books to school.
These books and Carla's bag weigh
4.5 kg together.

a) The books weigh **750 g**, **0.6 kg**, **700 g**, **420 g** and **1 kg**.

Work out the **total weight** of these **five books**.
Give your answer in **kg** and **g**.

Answer: _____ kg _____ g

b) Work out the **weight** of Carla's **empty bag**.

Answer: _____ kg _____ g

(5 marks)

13) Find the **size** of each angle marked with a letter.


$x =$ _____ °

$y =$ _____ °

$z =$ _____ °
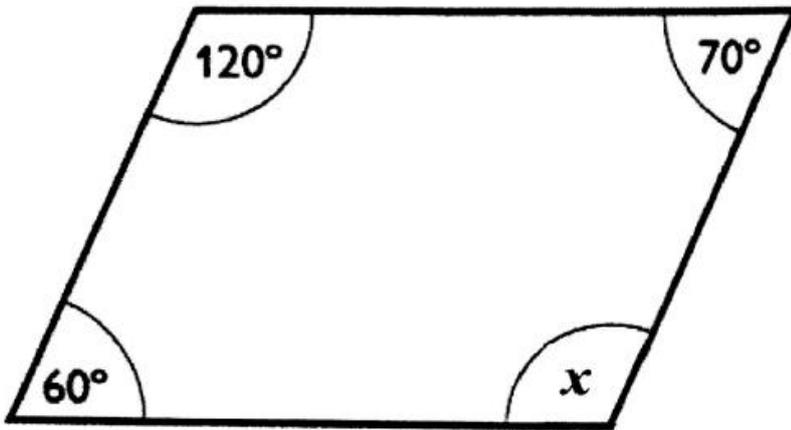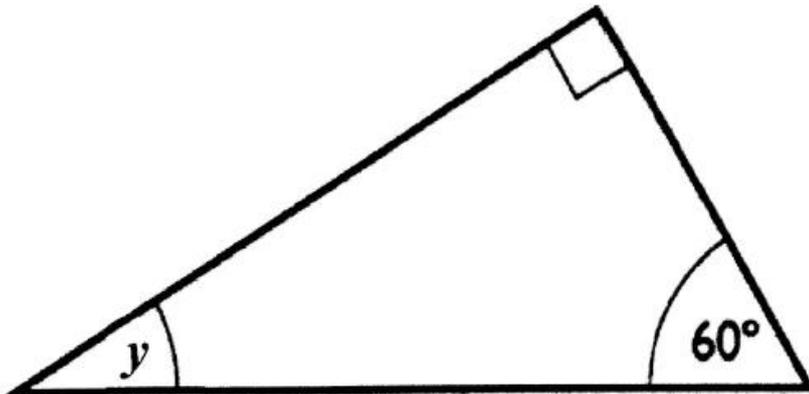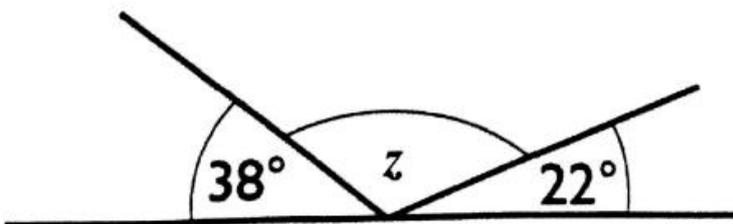
(9 marks)

14) a) One of the nets shown is that of a cube. Which one is it?
Tick (✓) the correct answer.
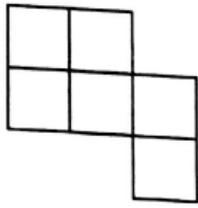
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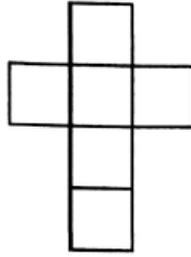
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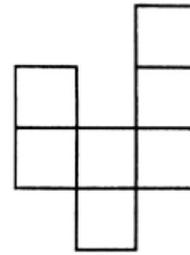
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b) **Fill in :** A cube has :

_____ faces

_____ edges

_____ vertices
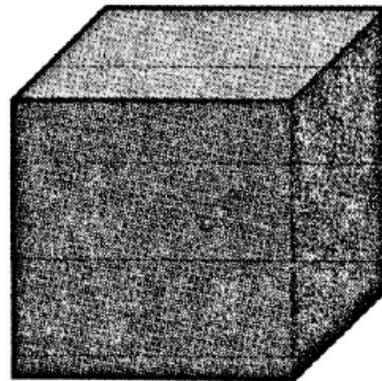
c) Look at the diagram and fill in the blanks.
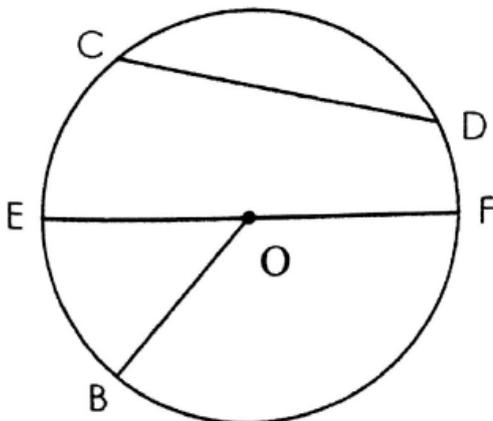
i. **OB** is called the _____.

ii. _____ is called the **diameter**.

(6 marks)

15) a) Draw **all lines of symmetry** of the following shapes.
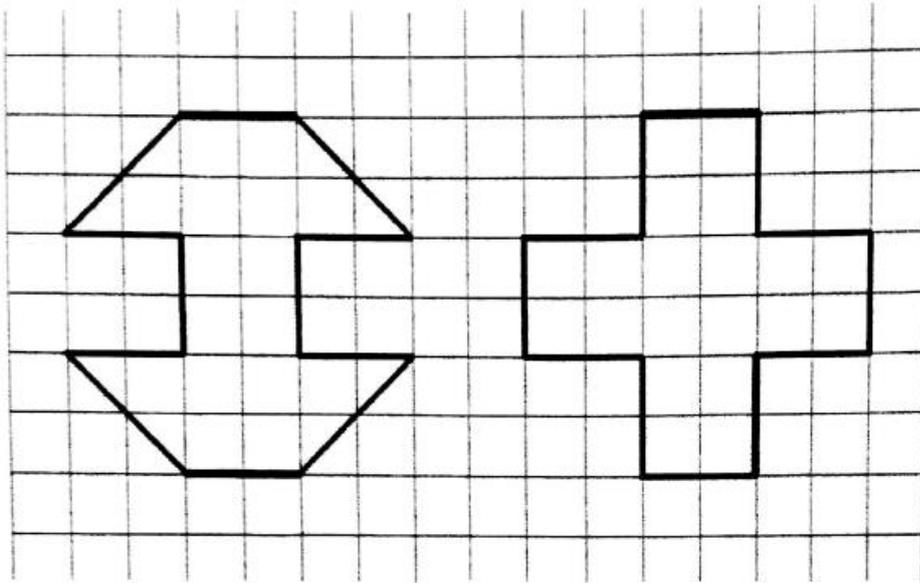
b) **Complete** the figures below to make them symmetrical about the dotted lines.

(6 marks)

END OF PAPER