SECONDARY SCHOOL ANNUAL EXAMINATIONS 2010

Directorate for Quality and Standards in Education
Educational Assessment Unit

D

FORM 3 **MATHEMATICS SCHEME D** **TIME: 30 minutes**

Non Calculator Paper

Name: _____ **Class:** _____

1	2	3	4	5	6	7	8	Total

INSTRUCTIONS TO CANDIDATES

- **Answer all questions.**
- **This paper carries a total of 25 marks.**
- **Calculators and protractors are not allowed.**

1 Fill in.

a) **3 kg** = _____ **grams**

b) _____ **metres** = **600 cm**

(2 marks)

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2 Work out.

(32 + 8) × 10

_____

(2 marks)

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3 **Complete** this table.

Fraction	Decimal	Percentage
$\frac{3}{10}$	**0.3**	
		25%

(3 marks)

---

4 Work out.

a) **€5.75 + €2.25** = **€**_____

b) **€2.50 × 4** = **€**_____

c) **€5.00 ÷ 10** = _____ **cent**

(3 marks)

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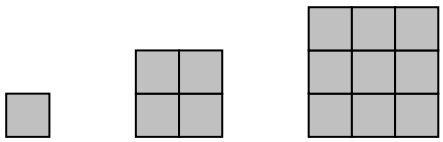
5 a) Fill in the **missing numbers**.

(i) **5, 10, 15, _____, 25**

(ii) **1, 2, 4, 8, _____, 32**

b) Draw the **next shape**.



(3 marks)

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6 This football costs **€24**.
At a **sale** it is sold at **half price**.

a) Work out the **sale price** of the football.

€_____

b) At the sale, Pawlu buys **3 footballs**.
How much does Pawlu pay for the 3 footballs?

€_____

(4 marks)

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7 a) Fill in.

10% of €500 = €_____

b) Fill in.

$$\frac{7}{10} - \frac{3}{10} = \frac{\quad}{10} = \frac{\quad}{2}$$

(4 marks)

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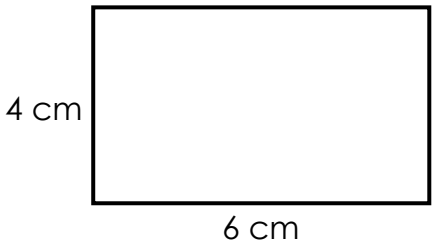
8 (a) Work out the **perimeter.**



Perimeter = _____ cm

(b) Work out the **area**.

Area = _____ cm^2

(4 marks)

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D

FORM 3 **MATHEMATICS SCHEME D** **TIME: 1h 30min**

MAIN PAPER

1	2	3	4	5	6	7	8	9	10	11	12	13	NC	Main	Total

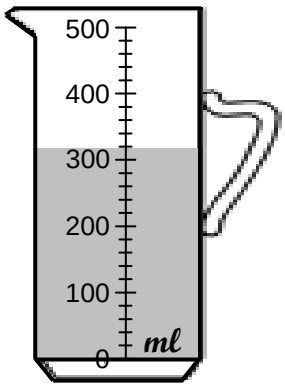
Name: _____ **Class:** _____

Calculators are allowed but the necessary working must be shown.
Answer all questions.

1 a) **Underline** the correct answer.

The **amount of water** in the jug is

(301 *mℓ*, 310 *mℓ*, 320 *mℓ*)

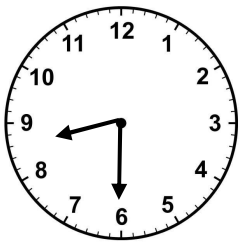


b) Fill in.

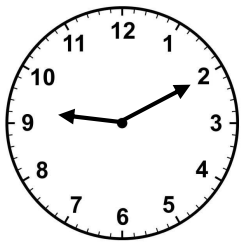
4 litres = _____ *mℓ*

(2 marks)

2



First lesson begins



First lesson ends

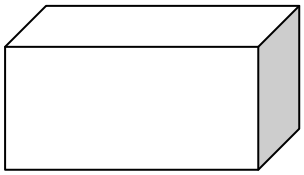
Fill in.

a) The first lesson **begins** at _____ past _____.

b) The first lesson is _____ **minutes** long.

(3 marks)

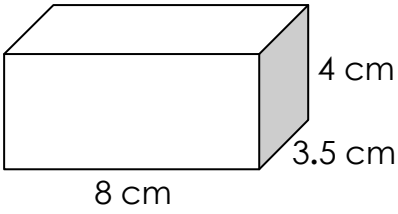
3 This shape is called a **cuboid**.



a) Fill in.

A cuboid has _____ **faces**, _____ **edges** and _____ **vertices**.

b) Work out the **volume** of the cuboid.



Answer: _____ cm^3

(5 marks)

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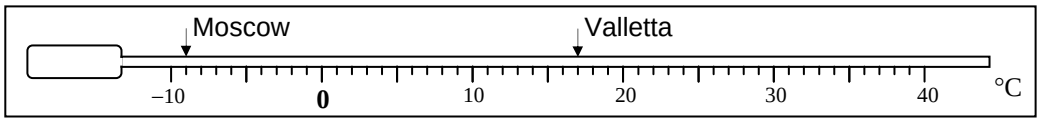
4 The diagram below shows the **temperatures** in a number of cities.



a) Write down the temperatures in

Moscow: _____ **Valletta**: _____

b) Write down the **difference** between the temperature in **Valletta** and the temperature in **Moscow**.

Difference: _____ °C

c) The temperature in Milan is **–2 °C**. Mark this temperature with **an arrow**.

(5 marks)

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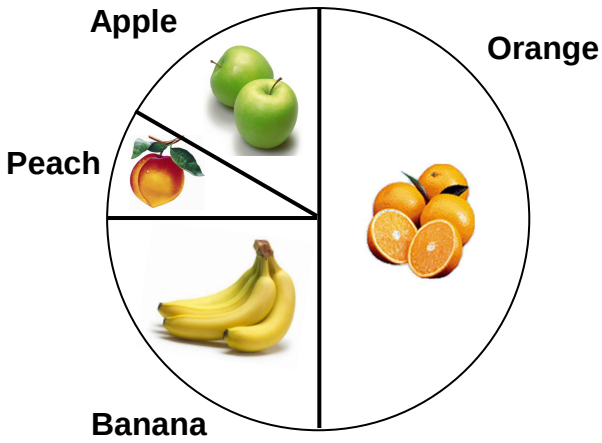
5 120 persons were asked to name their favourite fruit. Their answers are shown in the **pie chart**.



a) Which is the **most favourite** fruit?

_____

b) What **fraction** like **oranges**?

_____

c) **How many** persons like **bananas**?

_____ persons

d) A person is chosen at random. What is the **probability** that the person likes **bananas**?

_____

(5 marks)

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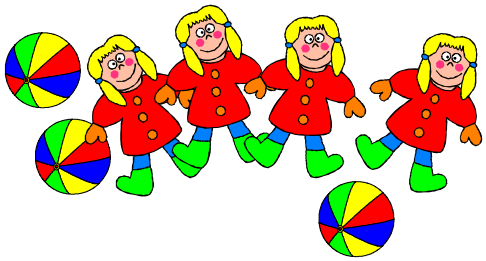
6 a) Write down the ratio **BALLS : DOLLS**.



_____

b) Complete the following **ratios**.

3 : 6	→	**1 : ___**
2 : 3	→	**4 : ___**

c) In a class the ratio of **boys : girls** is **1 : 3**. There are 7 boys. **How many girls** are there in the class?

_____ girls

(5 marks)

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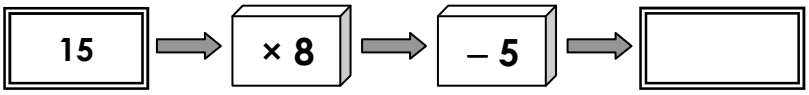
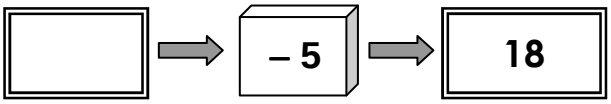
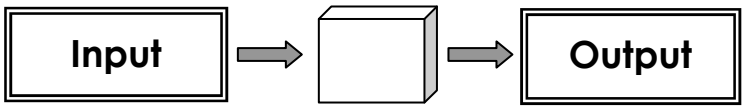
7 a) Complete these **number machines**.

(i) 

(ii) 

b) This number machine **doubles** the **input**.
Complete the function machine.



(6 marks)

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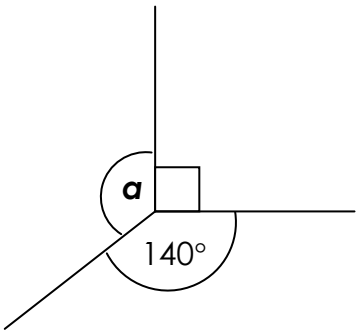
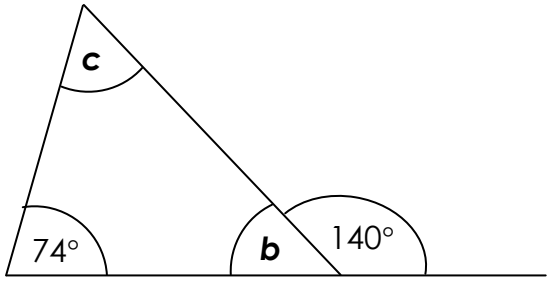
8 Work out the size of the **marked angles**.





a = _____ *b* = _____ *c* = _____

(6 marks)

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9 a) **Underline** the **bigger** quantity.

($\frac{1}{4}$ of **€84)** OR (**half** of **€50)**

By how much is it bigger?

€_____

b) Write in order, **largest first**.

1.8, 0.8, 18,

_____, _____, _____

(7 marks)

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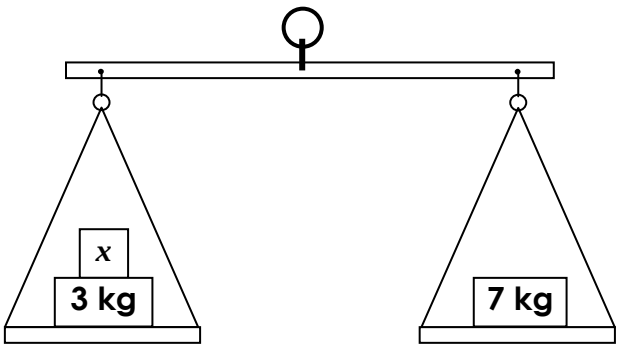
10 a) Find **the value of** x.



x = _____ kg

b) (i) This LOGO statement draws a letter of the alphabet. Draw a sketch of the letter.

PD FD 100 LT 90 FD 50 BK 100

(ii) Complete this LOGO statement to draw a **square**.

PD REPEAT ____ [FD 80 RT _____]

(6 marks)

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11 The following are the **shoe sizes** of pupils in a class.

4	4	4	5	5	5	5	5	5
5	5	5	5	6	6	6	6	6
6	6	6	7	7	7	7	8	8

a) Complete the **frequency table**.

Shoe size	**Frequency**
4	
5	
6	
7	
8	2
Total	

b) Fill in.

Largest size = _____

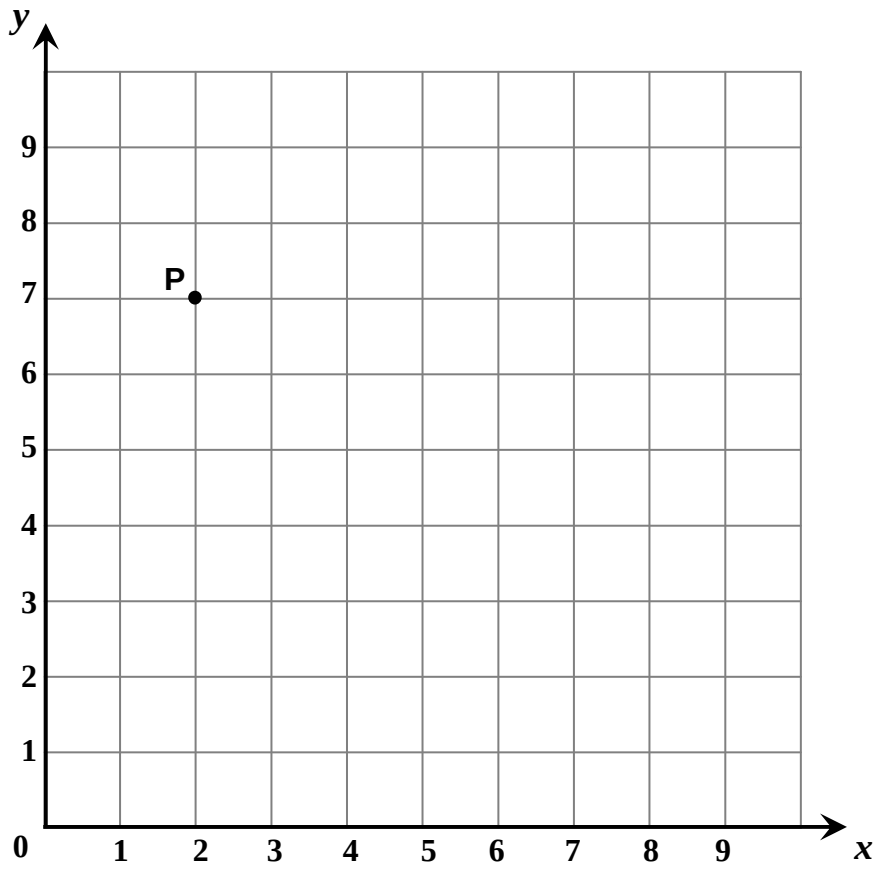
Median = _____

Mode = _____

Range = _____

(9 marks)

12 a) Write down the **coordinates** of point **P**. (,)



b) **Plot** the points **(4, 5)** and **(8, 1)**.

c) **Draw** a **line** passing through **all** the 3 points.

d) Fill in the missing numbers **below**.

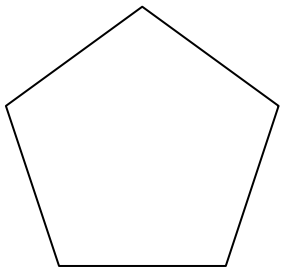
(2, 3) (3, 4), (4, ____), (5, 6), (6, ____)

e) **Plot** the points.

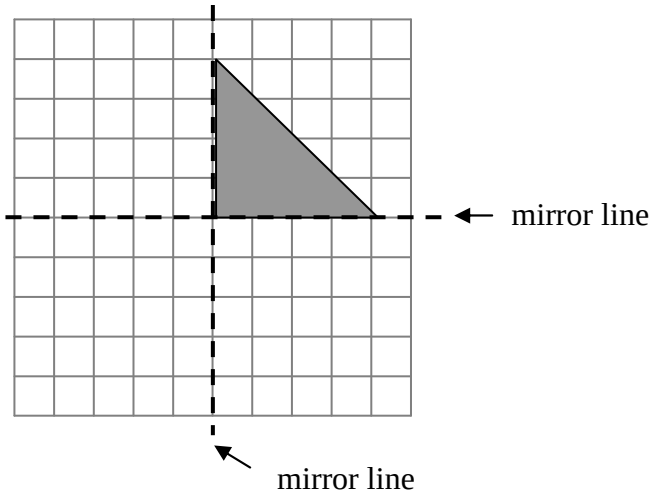
f) **Join the points** with a **straight line**.

(8 marks)

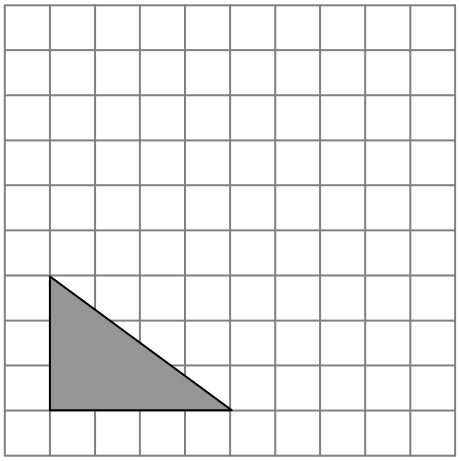
13 a) **Draw** all the **lines of symmetry** of this shape.



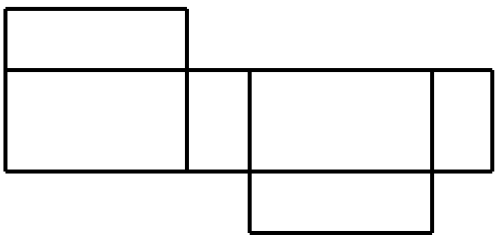
b) **Reflect** the shape in the **mirror lines**.



c) Draw the triangle after a **translation** of **4 to the right** and **5 up**.



d) (i) The picture shows the net of a (**cube, cuboid, pyramid**).



(ii) All the **faces** of a **cube** are (**triangles, rectangles, squares**).

(8 marks)