

SAINT IGNATIUS COLLEGE
Girls' Junior Lyceum
BLATA L-BAJDA
HALF YEARLY EXAMINATIONS 2010

FORM 1 MATHEMATICS SCHEME A TIME: 1 hour 30 min
Main Paper

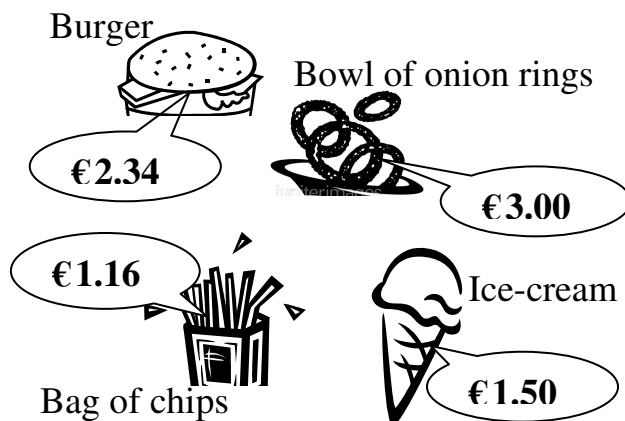
Name: _____ Class: _____

Question	1	2	3	4	5	6	7	8	Non Calculator	Main	Global Mark
Mark											

- Answer all questions.
- This paper carries **75** marks.
- Calculators and mathematical instruments are allowed but **ALL** necessary working must be shown.

1. A group of **6 youths** went to Annie's Take Away. They bought the items shown in the table.

Item	Cost in €
5 burgers	
6 bags of chips	
2 onion ring bowls	
8 ice-creams	
Total	



- (a) Fill in the above table to find the **total cost**.
- (b) The 6 youths decided to divide the **total cost** between them.
 How much did **each** pay?

Each paid € _____

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7 marks

2. Write **1008** as a product of its **prime factors**.
SHOW ALL YOUR WORKING.

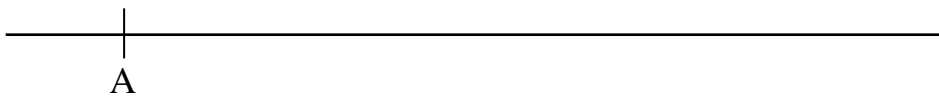
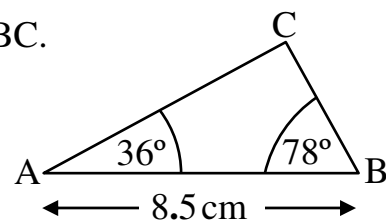
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1008 = _____



4 marks

3. (a) The diagram is a rough sketch of triangle ABC.
 Construct the triangle **accurately**.



- (b) Measure and write down the lengths of **AC** and **BC**.

AC = _____ **cm**, **BC** = _____ **cm**



7 marks

Name: _____

Class: _____

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4. The prices of a packet of rice at 6 different shops are:

€2.20, €2.15, €1.95, €2.00, €1.98 and €2.20.

(a) Work out the **mean** price.

Mean price = € _____

(b) A new grocery shop opens. The price of a packet of rice at **this** shop is €1.87.

(i) What is the **mean** price **now**?

Mean price = € _____

(ii) What is the mode of **these seven prices**?

Mode = € _____

(iii) Work out the **range** of the **seven prices**.

Range = € _____



9 marks

5. A cereal mixture contains 250 g of rice, 375 g of wheat and 500 g of corn.

(a) Write down and **simplify** the ratio of rice : wheat : corn.

Rice : Wheat : Corn = _____ : _____ : _____

(b) Given that 5625 g of wheat are used, work out:

(i) The weight of **rice** used.

(ii) The weight of **corn** used.

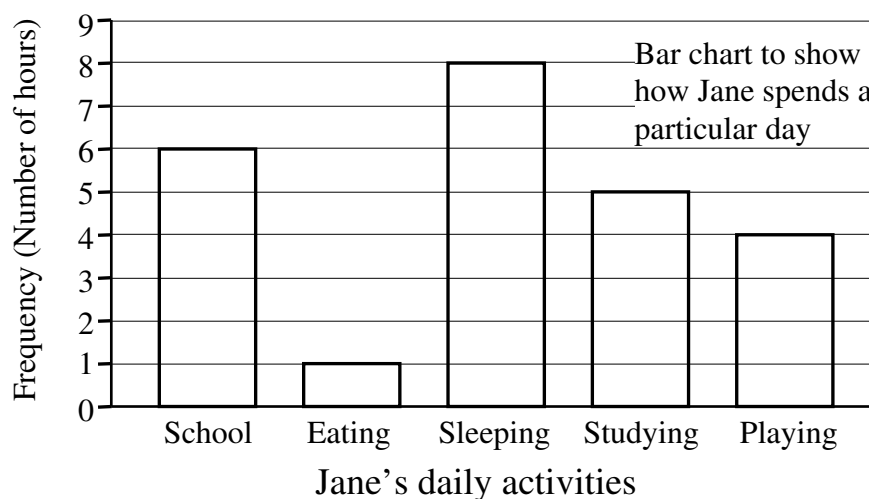
Weight of rice used = _____ **g**

Weight of corn used = _____ **g**



8 marks

6. The following bar chart gives information on how Jane spends a particular day (24 hours).

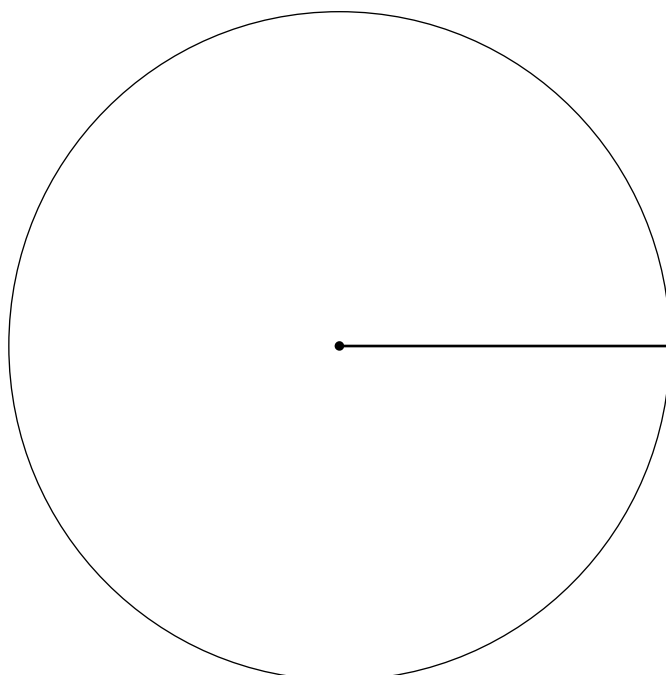


- (a) Use the above bar chart to complete the following table.
(The working for **Playing** is done for you). **Show your working.**

Activity	School	Eating	Sleeping	Studying	Playing
Number of Hours					4
Angle of slice on pie chart					60°

- (b) Show the above information on the pie chart.
Label your pie chart.

Pie chart to show Jane's daily activities

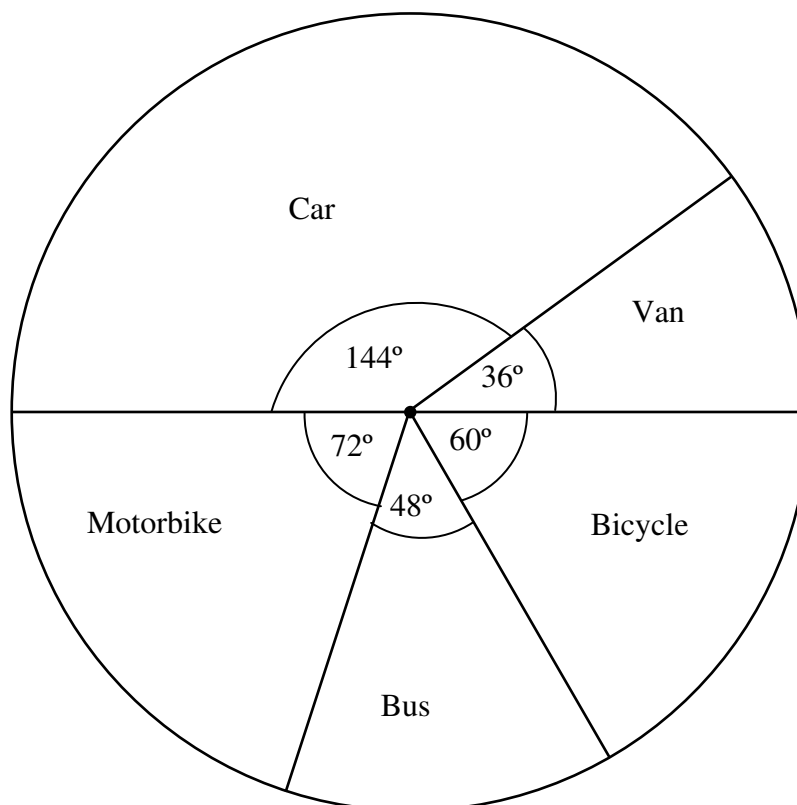


$$\frac{\cancel{1}4}{\cancel{24}} \times \frac{60}{\cancel{360}} = 60^\circ$$

6. (c) At school Jane is learning how to draw pie charts.
 She kept a record of the traffic passing by her house in one hour.
 She counted a total of 30 vehicles passing by her house.
 Jane drew a pie chart to show this information.

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Pie chart to show type of vehicle



- (i) Work out the number of **cars** that passed by Jane's house in one hour.

Number of cars = _____

- (ii) Work out the number of **buses** that passed by Jane's house in one hour.

Number of buses = _____



15 marks

7. Use the graph paper on the next page to answer this question.

- (a) (i) Plot the following points: A (1,1), B (1, 2.5), C (2.5, 2.5) .
Join A to B to C.

(ii) Plot the fourth point, **D**, needed to make a **square**.

(iii) Write down the co-ordinates of **D**.

Co-ordinates of **D** = (,)

- (b) (i) Plot the following points: E (-2, 3), F (0.5, 3), G (0.5, 4) .
Join E to F to G.

(ii) Plot the fourth point, **H**, needed to make a **rectangle**.

(iii) Write down the co-ordinates of **H**.

Co-ordinates of **H** = (,)

- (c) Look at the shape **IJKL** on the next page.

(i) Write down the co-ordinates of the points I, J, K and L.

I = (,) **J** = (,) **K** = (,) **L** = (,)

(ii) What is the shape **IJKL** called?

IJKL is called a _____

- (d) Look at the shape **PQR** on the next page.

(i) Write down the co-ordinates of the points P, Q and R.

P = (,) **Q** = (,) **R** = (,)

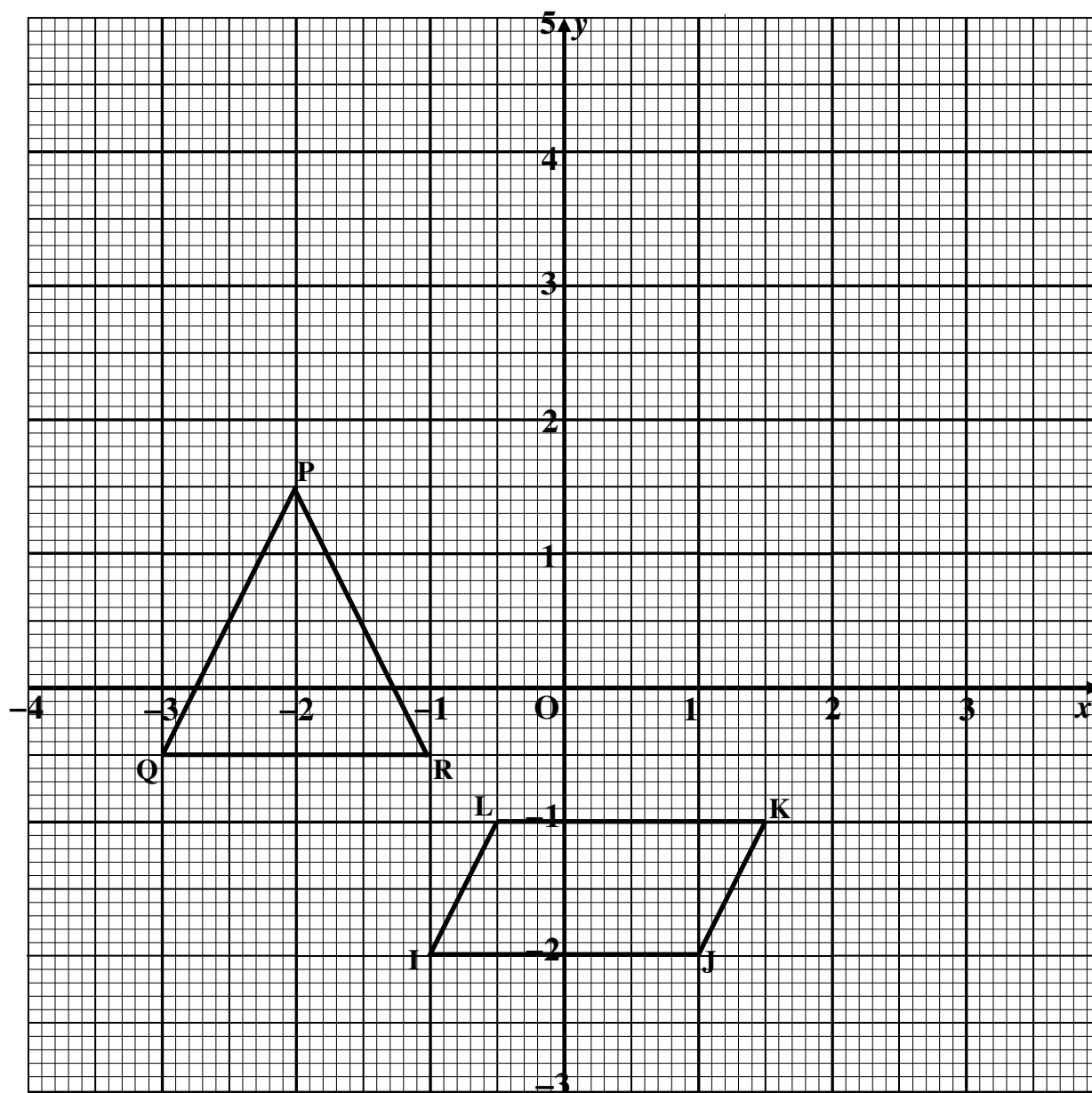
(iii) What type of triangle is **PQR**?

Triangle PQR is _____

(e) Which **one** of the shapes ABCD, EFGH, IJKL and PQR is **regular**?

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The shape that is regular is _____



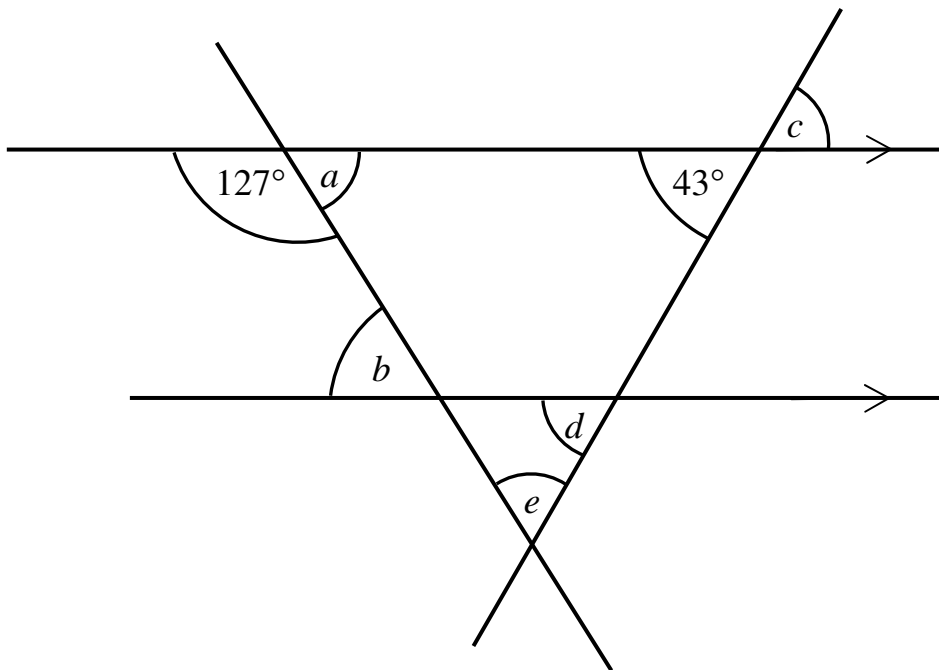
15 marks

8. Find the value of each lettered angle in the diagram.

Show ALL your working and give reasons for your answers.

*Remember to write down any angle found, **on the diagram**.
This helps you to find the remaining angles.*

Do **NOT**
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$$a = \text{ }^\circ \text{ (} \text{)}$$

$$b = \text{ }^\circ \text{ (} \text{)}$$

$$c = \text{ }^\circ \text{ (} \text{)}$$

$$d = \text{ }^\circ \text{ (} \text{)}$$

$$e = \text{ }^\circ \text{ (} \text{)}$$



10 marks

END OF PAPER