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Rewarding Learning

General Certificate of Secondary Education

January 2009

Mathematics

Module N1 Paper 2
(With calculator)
Foundation Tier

[GMN12]

GMN12

FRIDAY 9 JANUARY

10.30 am – 11.15 am

TIME

45 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.
Write your answers in the spaces provided in this question paper.
Answer **all twelve** questions.
Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 44.
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.
You should have a calculator, ruler, compasses, set-square and protractor.

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
Total Marks	

4237

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1 The number of medals won by Chile in the Special Olympics is shown in the pictogram below.

MEDALS WON

Gold	◯ ◯	8
Silver	◯ ◯ ◯ ◖	
Bronze		20

(a) Complete the key for the pictogram.
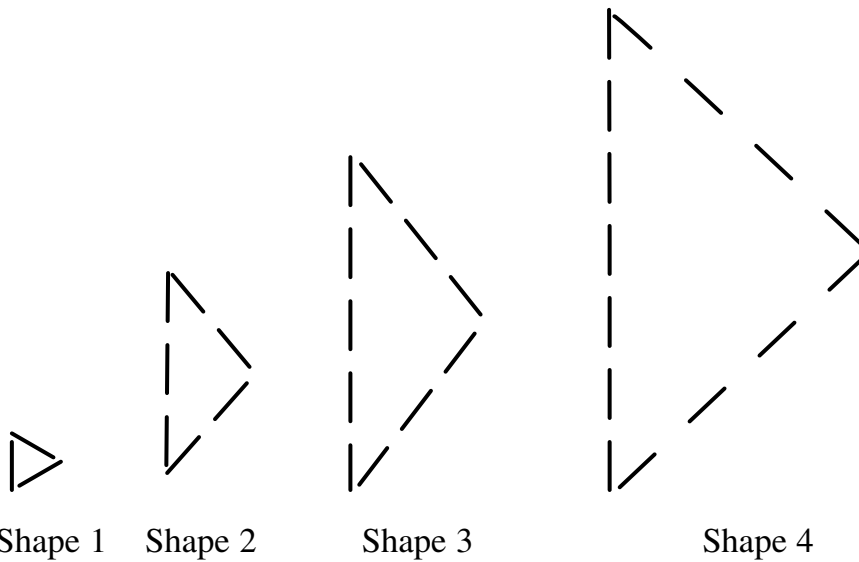
◯ represents _____ medals   [1]

(b) How many silver medals were won?

Answer _____ [1]

(c) Complete the pictogram to show the number of bronze medals.   [1]

[Turn over

2 Triangular shapes are formed using matchsticks.

Shape 1   Shape 2   Shape 3   Shape 4

(a) Complete the table to show the total number of matchsticks needed for Shape 5.

Shape number	1	2	3	4	5
Number of matchsticks	3	7	11	15	

[1]

(b) What pattern do you notice in the 'Number of matchsticks' row?

_____

_____[1]

3 What metric unit would you use to measure

(a) the amount of liquid on a teaspoon,

Answer _____ [1]

(b) the weight of a packed suitcase?

Answer _____ [1]

4237

4 **(a)**

The rectangle is divided into 12 equal parts.

Write down, **in its simplest form**, the fraction of the rectangle which is **shaded**.

Answer _____ [2]

(b) Write $\frac{1}{4}$ as a percentage.

Answer _____% [1]

(c) Write 0.75 as a fraction in its simplest form.

Answer _____ [1]

(d) $\frac{2}{3}$ $\frac{6}{9}$ $\frac{10}{15}$ $\frac{4}{12}$ $\frac{4}{6}$ $\frac{2}{5}$

Explain why $\frac{4}{12}$ and $\frac{2}{5}$ are different from the other fractions.

[2]

[Turn over

5 Ten students have part time jobs at the weekend. Their earnings are

£20   £33   £19   £22   £31

£36   £28   £25   £27   £34

Calculate the mean amount of money earned by the students.

Answer £_____ [3]

6 **(a)** Write down the number thirty-seven thousand and fifty-six in figures.

Answer _____ [1]

(b) Calculate $(3.27)^2$

Answer _____ [1]

(c) Write down the largest of these three numbers.

0.5788   0.572   0.58

Answer _____ [1]

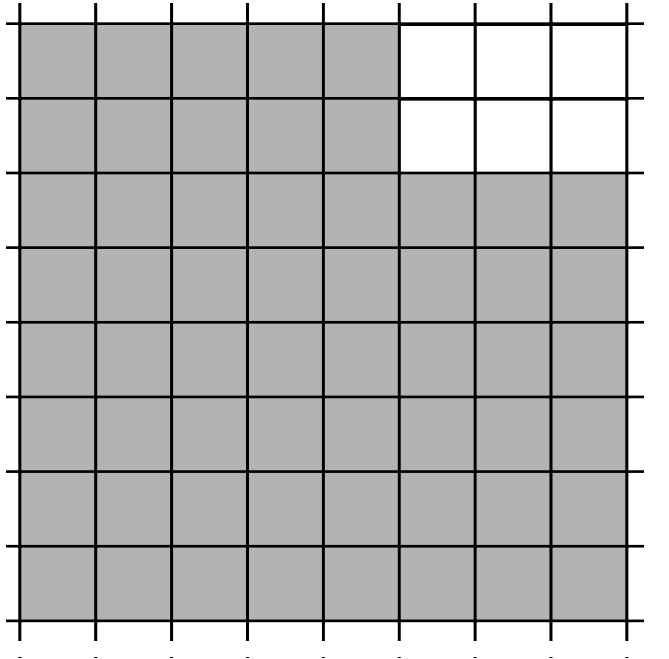**(d)** Write 51.07718 correct to two decimal places.

Answer _____ [1]

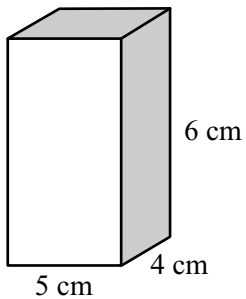**(e)** Write 34.56 correct to three significant figures.

Answer _____ [1]

4237

7 **(a)** Find the area of the shaded shape. Each small square has side 1 cm.

Answer _____ [3]

(b) Calculate the volume of the cuboid shown.

6 cm

4 cm

5 cm

Answer _____ cm^3 [2]

(c) A different cuboid has volume 300 cm^3. Its breadth is 5 cm. Write down possible dimensions for its length and height.

Answer _____ cm and _____ cm [1]

[Turn over

8   Ann has £10 to buy notebooks at 85p each.

What change should she get if she buys as many as possible?

Answer _____ [3]

9   **(a)**

The pie chart shows the preferred choice of music of 48 people questioned in a street survey.

(i)   How many people preferred jazz?

Answer _____ [1]

(ii)   How many people preferred classical music?
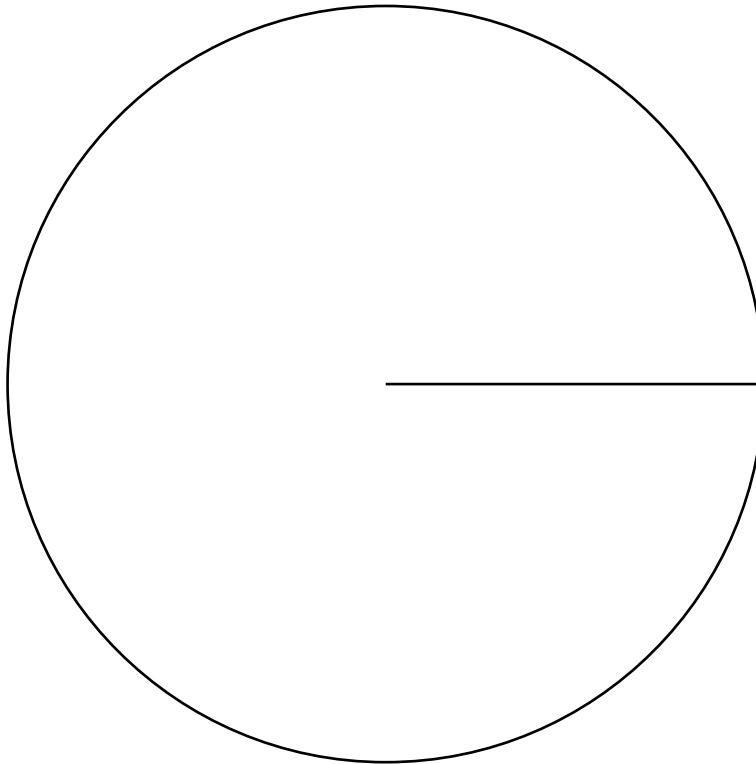
Answer _____ [2]

4237

(b) The table below gives the estimated population of each of five countries in the year 2000.
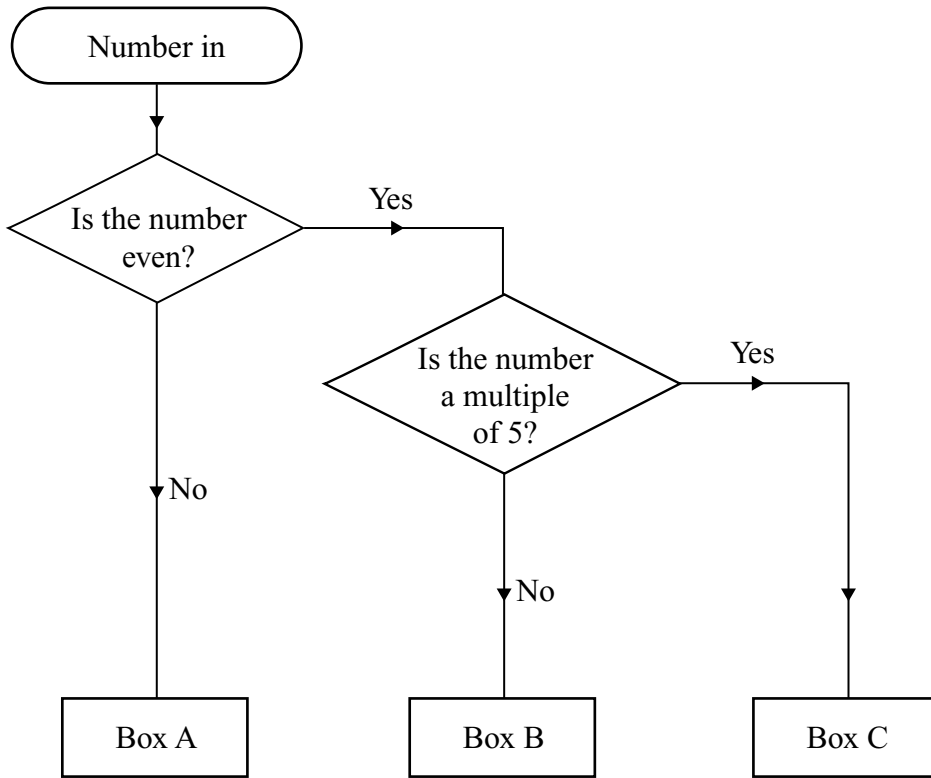
Draw a pie chart to illustrate this information.

Country	Population (millions)
N. Ireland	1.6
Wales	2.7
Republic of Ireland	3.9
Scotland	5.0
England	46.8

[4]

[Turn over

10

Number in

Is the number even?

Yes

Is the number a multiple of 5?

Yes

No

No

Box A

Box B

Box C

Using the decision tree diagram, name the box for

(a) 22   Answer Box _____

(b) 31   Answer Box _____

(c) 40   Answer Box _____ [2]

11 A boy starts school at 9 am. He finishes at 3.25 pm.
There is a 15 minute mid-morning break and a 50 minute lunch break.
There are 8 lessons in the day, each of the **same** length.
How long is each lesson?
Show your working.

Answer _____ minutes [3]

4237

12 Calculate

(a) the cube of 6

Answer _____ [1]

(b) 2^4

Answer _____ [1]

_____

THIS IS THE END OF THE QUESTION PAPER

_____

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