71

Candidate Number

cea

Rewarding Learning

General Certificate of Secondary Education

2009

Mathematics

Module N1 Paper 2
(With calculator)
Foundation Tier

[GMN12]

GMN12

MONDAY 18 MAY

2.45 pm – 3.30 pm

TIME

45 minutes.

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

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.

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BLANK PAGE

1 Blocks are stacked as shown.
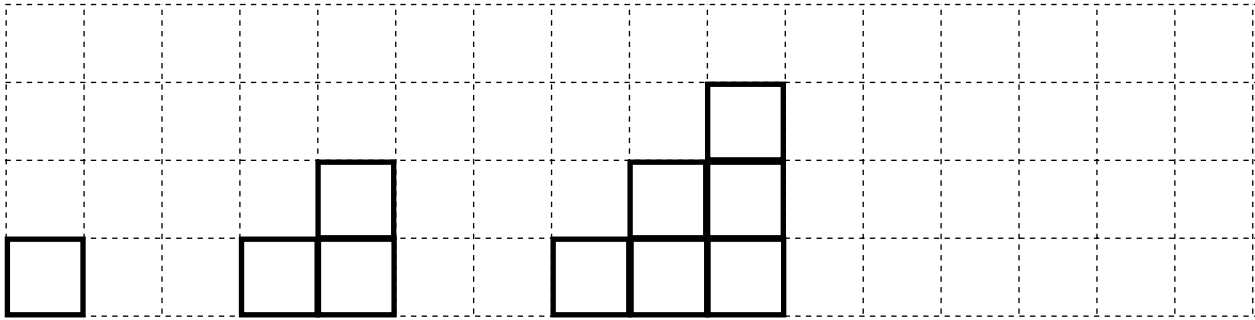

Diagram 1   Diagram 2   Diagram 3   Diagram 4

(a) Draw diagram 4.   [1]

(b) Complete the table for diagrams 4 and 5.

Diagram	1	2	3	4	5
Number of blocks	1	3	6		

[1]

2 **(a)**
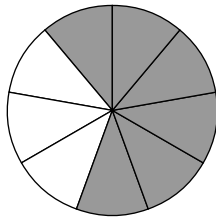
Write down the fraction shaded, in its simplest form.

Answer _____ [2]

(b) Which fractions in the list

$$\frac{3}{12} \qquad \frac{4}{15} \qquad \frac{5}{20} \qquad \frac{6}{24} \qquad \frac{8}{30}$$

are **not** equivalent to $\frac{1}{4}$?

Answer _____ [2]

3 Janet recorded the types of vehicles passing her house.

Type of vehicle	Tally	Frequency
Lorry	ḤḤ *l*	6
Bus	*ll*	2
Car	ḤḤ ḤḤ *ll*	12
Motorbike	*llll*	4
Van	*lll*	3

(a) On the graph paper, draw a bar chart to show this information. [3]

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(b) Which is the most popular type of vehicle?

Answer _____ [1]

(c) How many vehicles did Janet record altogether?

Answer _____ [1]

4 Which **metric** unit would be used for

(a) weighing a bag of potatoes?

Answer _____ [1]

(b) measuring the amount of liquid in a can of soft drink?

Answer _____ [1]

(c) measuring the distance between two large cities in Europe?

Answer _____ [1]

5 **(a)** What change should you get from £5 if you bought 4 packets of biscuits at 63p each?

Answer _____ [2]

(b) How many boxes of chocolates costing £4.20 could you buy for £30?

Answer _____ [2]

6 (a) A four-sided shape ABCD is drawn on the 1 cm grid.
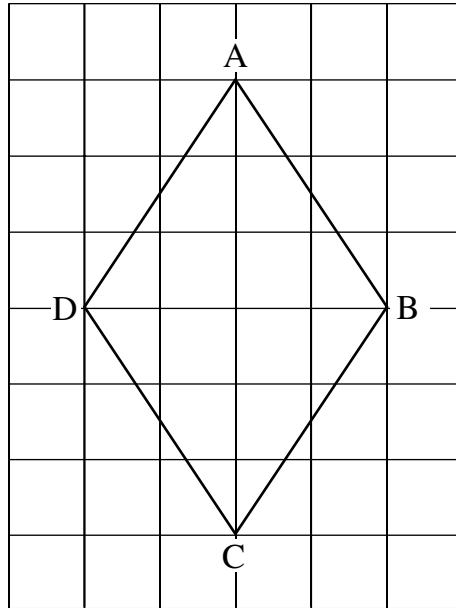
Find the area of ABCD.
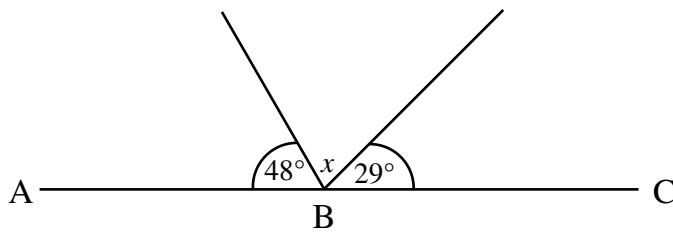
Answer _____ cm² [1]

(b) ABC is a straight line.

Diagram
not drawn
accurately

Calculate the size of angle x.

Answer _____ ° [1]

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7 **(a)** Calculate

   (i) $\sqrt{31.36}$

Answer _____ [1]

   (ii) 7.3^2

Answer _____ [1]

(b) Lee's salary is £16 000 and he is due to get an increase of 5%.
How much will this increase be?

Answer £ _____ [2]

(c) **(i)** Write 25.289 correct to 2 decimal places.

Answer _____ [1]

   (ii) Write 8.45 correct to 1 decimal place.

Answer _____ [1]

[Turn over

8 **(a)** $p = 2,\ q = \frac{1}{2},\ r = 4$

Evaluate $p + 2q - r$

Answer _____ [2]

(b) Solve the equation $\dfrac{y}{3} = 6$

Answer $y =$ _____ [1]

---

9 The temperature was 1 °C. Later it was –7 °C.

(a) How much had the temperature fallen?

Answer _____ °C [1]

The temperature then rose by 3 °C.

(b) What was the final temperature?

Answer _____ °C [1]

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10 The 10 boys in Class 12A gained the following marks in a test.

18,   12,   15,   9,   13,   14,   20,   11,   10,   8

The 8 girls in Class 12A gained a total of 128 marks.

Which group did better, boys or girls? Give a reason for your answer.

Answer _____

because _____

_____ [4]

---

11 Calculate

(a) the cube root of 343

Answer _____ [1]

(b) $\dfrac{10}{0.5^2}$

Answer _____ [2]

[Turn over

12

N

B
×

T
×

T is a point at the centre of a town square.
T and a bank, B, are marked on the diagram above.

(a) **(i)** Find the bearing of B from T.

Answer _____ ° [1]

The scale of the diagram is 1 cm = 20 m.

The cinema, C, is 90 m from T and on a bearing of 160° from T.

(ii) Mark the position of the cinema, C, on the diagram.   [2]

(b)
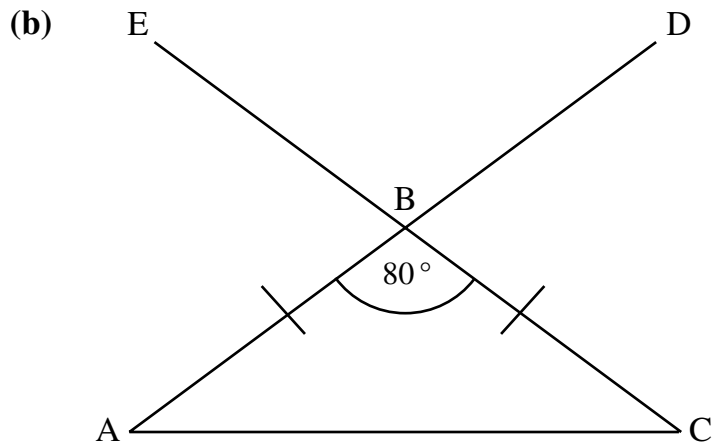
Diagram not
drawn accurately

ABC is an isosceles triangle. ABD and CBE are straight lines.
Angle ABC is 80°

Find the size of

(i) angle EBD.

Answer _____ ° [1]

(ii) angle BAC.

Answer _____ ° [2]

_____

THIS IS THE END OF THE QUESTION PAPER

_____

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