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71

Candidate Num

General Certificate of Secondary Education
January 2011

Mathematics

Module N1 Paper 1
(Non-calculator)
Foundation Tier

[GMN11]

TUESDAY 11 JANUARY
9.15 am – 10.00 am

GMN11

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 thirteen** questions.
Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.
You **must not** use a calculator for this paper.

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 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	
13	
Total Marks	

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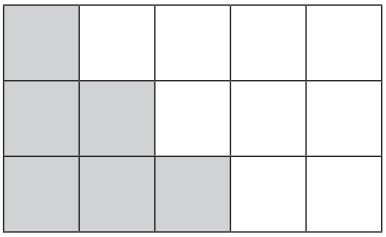
1



(a) What fraction of the above shape is shaded?

Write your answer in its simplest form.

Answer _____ [2]

(b) Write your answer to part **(a)** as a percentage.

Answer _____ % [1]

(c) What percentage of the shape is **not** shaded?

Answer _____ % [1]

Examiner Only	
Marks	Remark

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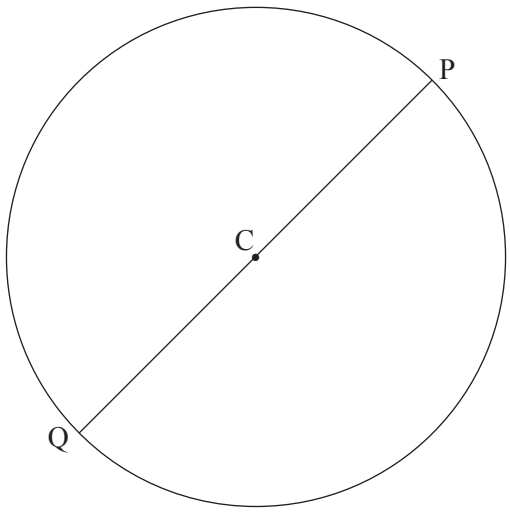
Examiner Only	
Marks	Remark

2 C is the centre of the circle. P and Q are two points on the circumference of the circle.



(a) What is the name of the straight line PQ?

Answer _____ [1]

(b) Draw the tangent at P. [1]

(c) Measure the radius of the circle.

Answer _____ [2]

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3 **(a)** Using each of the digits 6, 8, 7, 5

(i) write down the largest 4-digit even number,

Answer _____ [1]

(ii) write down the smallest 4-digit odd number.

Answer _____ [1]

(b) Insert a number in the box to make the two fractions equivalent.

$$\frac{5}{7} = \frac{\square}{21}$$ [1]

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Marks	Remark

4 **(a)** Fill in the two missing numbers in this sequence

___, 5, 9, 13, 17, ___ [2]

(b) **(i)** Describe in words how to find the fifth term in the sequence below.

4, 7, 11, 16, ...

Answer _____ [1]

(ii) Write down the sixth term in this sequence.

Answer _____ [1]

---

5 The number of books in the bags of a class were recorded.

Number of Books	Frequency
0	2
1	6
2	7
3	6
4	4
5	5

(a) Write down the modal number of books.

Answer _____ [1]

(b) How many pupils were in the class?

Answer _____ [1]

---

6 A chocolate bar costs 72p.

Ruth buys 4 of these chocolate bars.

How much change should she receive from £5?

Answer £ _____ [2]

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Examiner Only	
Marks	Remark

7 The digital clock displays the time of departure of a train.

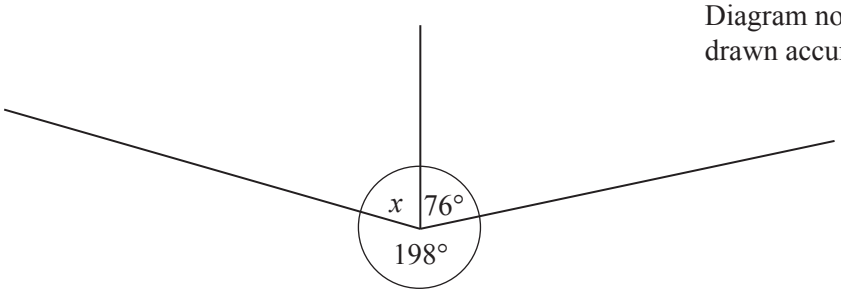
The journey takes 1 hour and 42 minutes.

Write down the arrival time.

Answer _____ [2]

8

Diagram not drawn accurately.



(a) 76° is an acute angle.

What type of angle is 198° ?

Answer _____ [1]

(b) Susan says angle x is also 76°

Explain why she is wrong.

[2]

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9

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Marks	Remark

Draw and label arrows to show A, B and C on the number line above.

(a) A at 2.9

(b) B at $3\frac{2}{3}$

(c) C at $1\frac{1}{2}$ [3]

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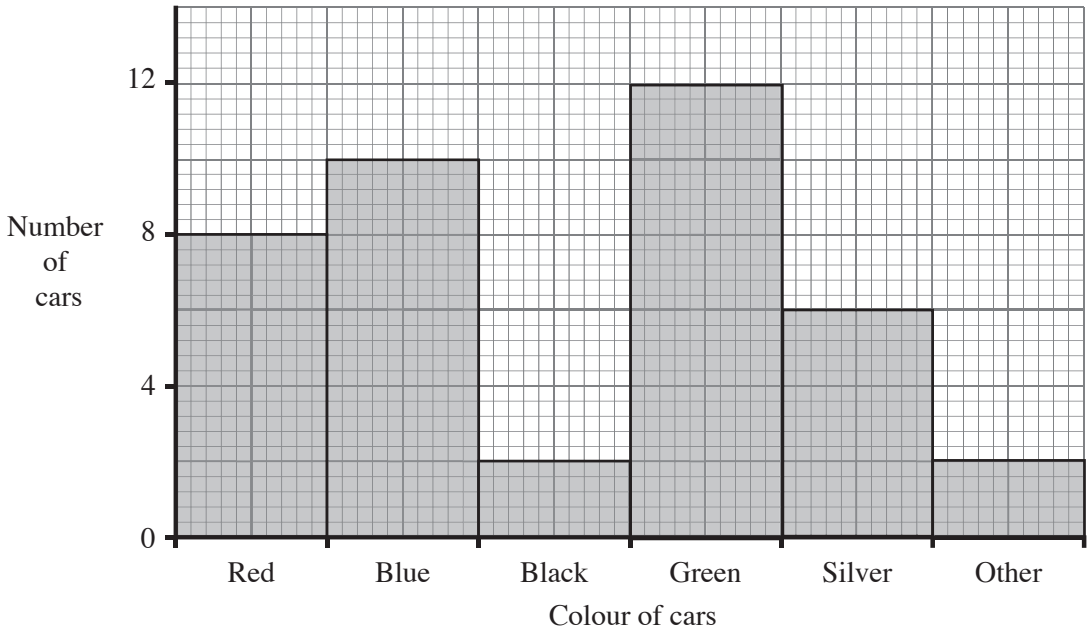
10 The colours of the cars passing the school gates were noted during a school day. The bar chart for the data is shown below.



(a) How many red cars were there?

Answer _____ [1]

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(b) How many more blue cars were there than black cars?

Answer _____ [1]

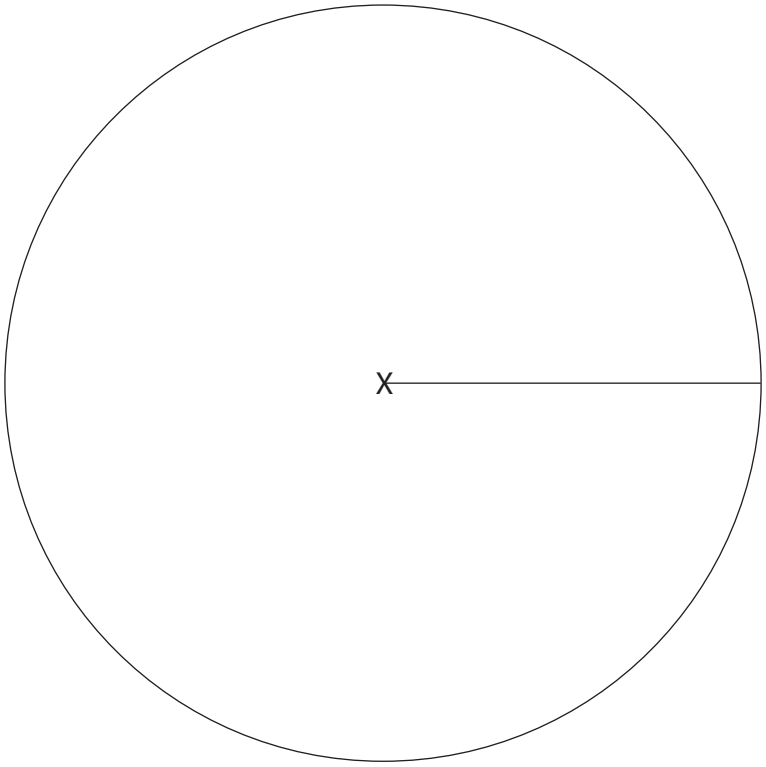
(c) Which colour of car was the most common?

Answer _____ [1]

(d) On another day the colours of cars were

Colour	Red	Blue	Black	Green	Silver	Other
Number of cars	6	12	2	10	8	2

Draw a clearly labelled pie chart for this data.



[4]

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Marks	Remark

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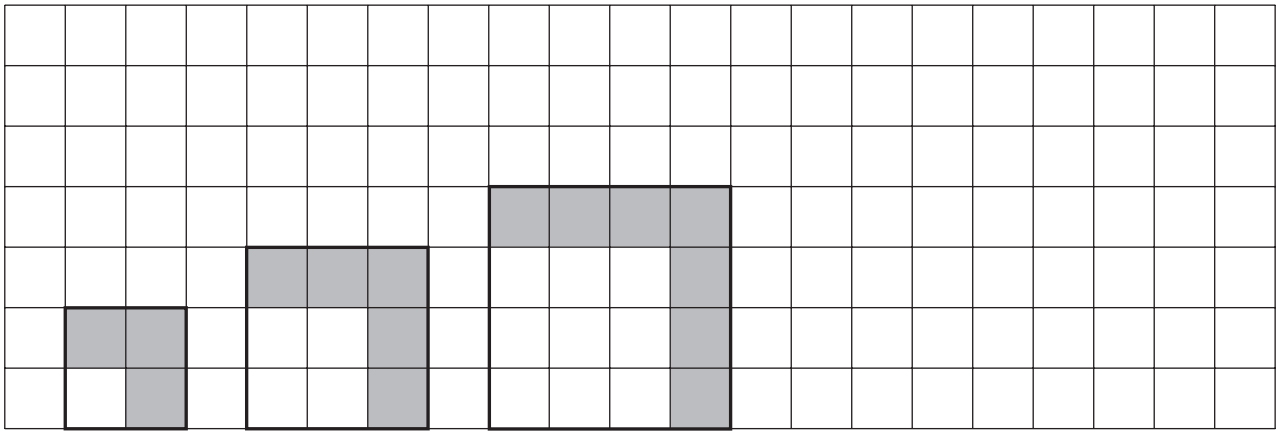
11 A sequence of patterns is drawn below.



$2^2 - 1^2$ $3^2 - 2^2$ $4^2 - 3^2$

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Marks	Remark

(a) Draw the pattern for $5^2 - 4^2$ [1]

(b) Fill in the blanks in the table

$2^2 - 1^2 =$	4	– 1	=	3
$3^2 - 2^2 =$	9	– 4	=	5
$4^2 - 3^2 =$	16	– 9	=	7
$5^2 - 4^2 =$	___	– ___	=	___

[1]

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Marks	Remark

12 Work out

(a) 0.3×0.3

Answer _____ [1]

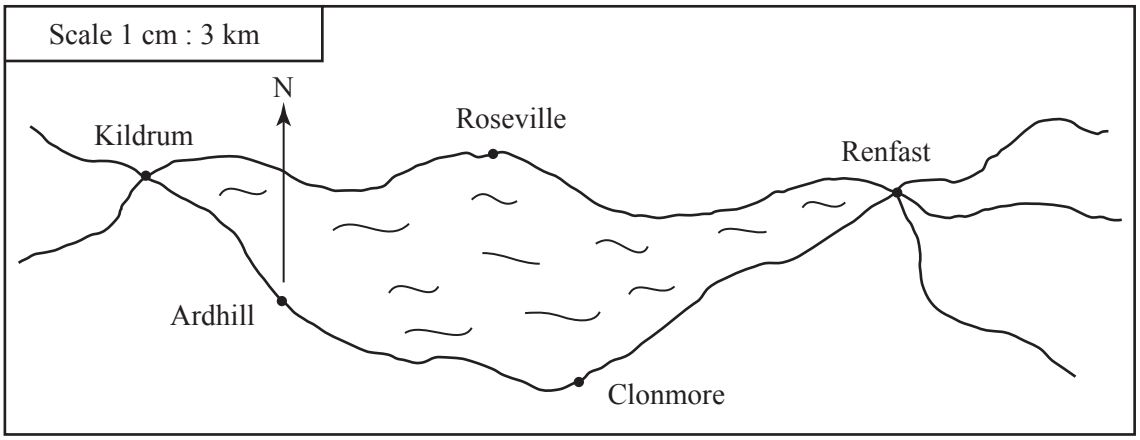
(b) $4.2 - 1.66$

Answer _____ [1]

(c) $\frac{3}{4} - \frac{5}{12}$

Answer _____ [2]

13 The map shows the position of five towns around a lake.



(a) Use the map to measure the bearing of Roseville from Ardhill.

Answer _____ ° [1]

(b) Use the map and scale to find the direct distance across the lake between Kildrum and Clonmore.

Answer _____ km [3]

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THIS IS THE END OF THE QUESTION PAPER

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