Rewarding Learning

Centre Number

71	

Candidate Number

General Certificate of Secondary Education
January 2012

Mathematics

Module N1 Paper 1
(Non-calculator)
Foundation Tier

[GMN11]

WEDNESDAY 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 eleven** 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.

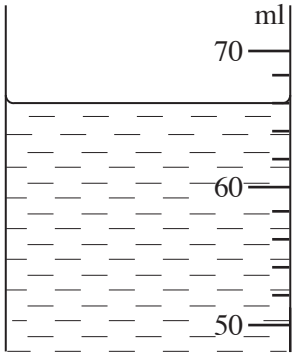
INFORMATION FOR CANDIDATES

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	
Total Marks	

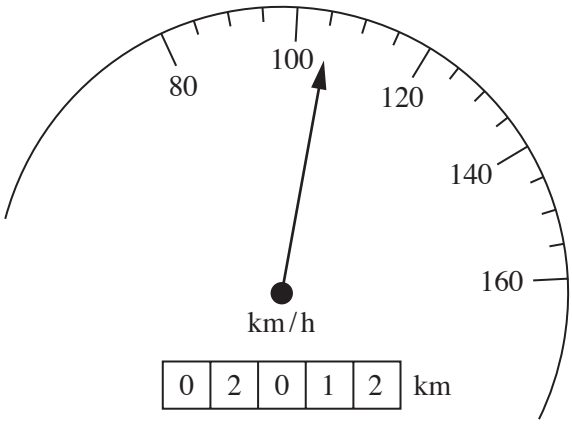
Examiner Only	
Marks	Remark

1 **(a)** Write down the volume of water in this measuring cylinder.



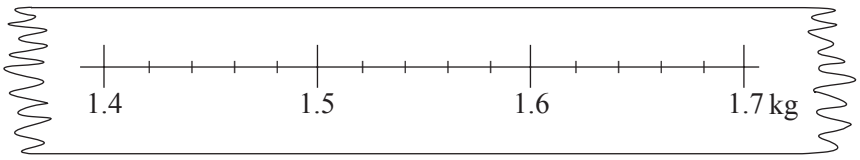
Answer _____ ml [1]

(b) Write down the speed shown by the arrow.



Answer _____ km/h [1]

(c) Draw an arrow to show the mass of a block of wood of 1.53 kg.



[1]

Examiner Only	
Marks	Remark

2 Here is a pictogram showing the number of members who played at the local tennis club last week.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

(a) Write down the number of members who played on Wednesday.

Answer _____ [1]

(b) On which two days were there the same number of members playing?

Answer _____ and _____ [1]

(c) How many members in total played on Thursday and Friday if no member played on both days?

Answer _____ [1]

(d) On Saturday 21 members played at the club.

Show this on the pictogram. [1]

Examiner Only	
Marks	Remark

3 **(a)** Write 0.4 as a percentage.

Answer _____% [1]

(b) Write 0.35 as a fraction.

Give your answer in its **simplest** form.

Answer _____ [2]

(c) Write 5% as a decimal.

Answer _____ [1]

4

4	5	6
8	9	10
12	14	17
21	25	35

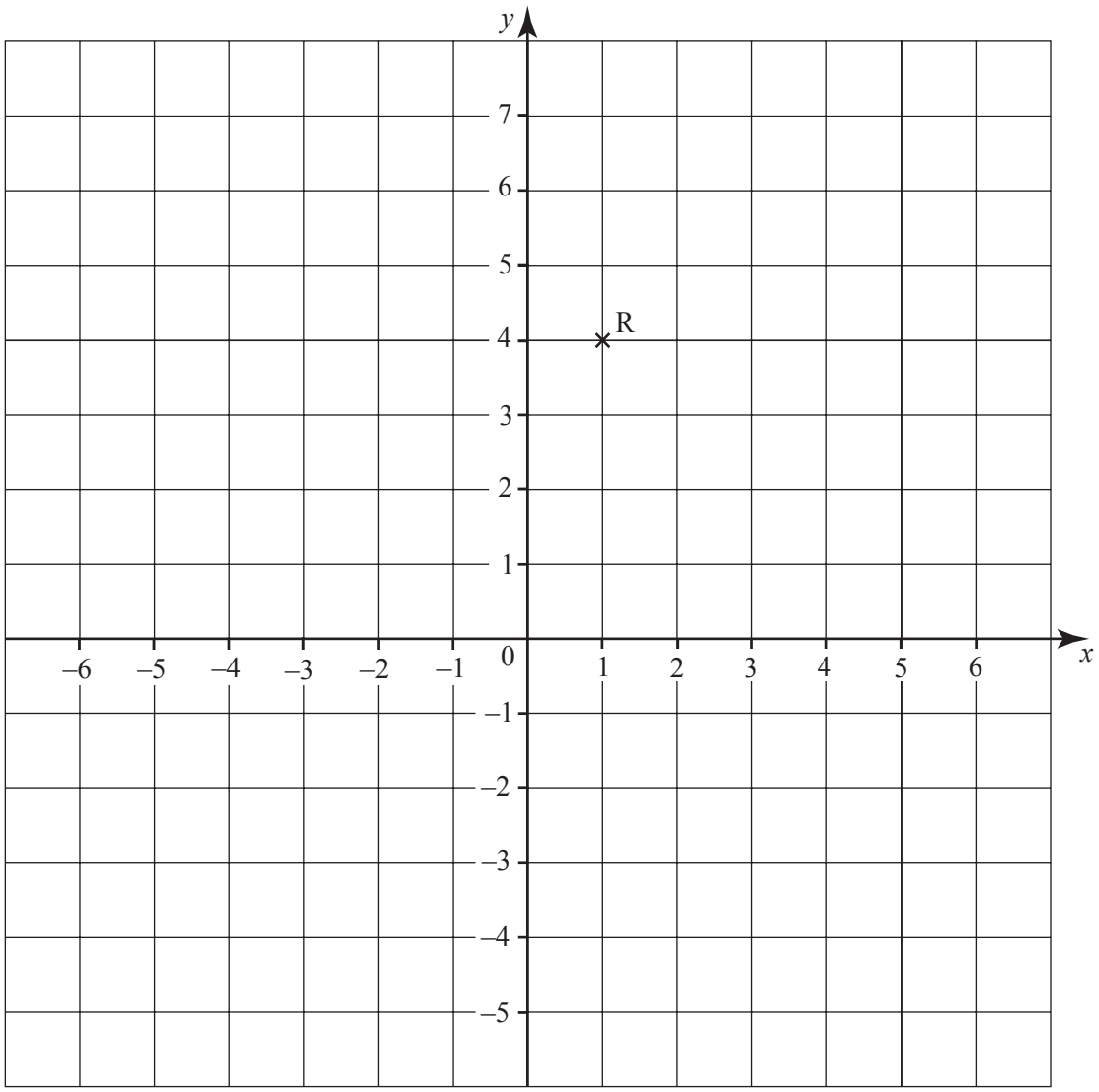
From the numbers in the grid, write down:

(a) the multiples of 3, Answer _____ [2]

(b) the factors of 48, Answer _____ [2]

(c) the prime numbers. Answer _____ [2]

5



(a) Write down the co-ordinates of the point R.

Answer (_____ , _____) [1]

(b) Plot and label the points S (–5, 2) and T (–1, –2). [2]

Examiner Only	
Marks	Remark

Examiner Only

Marks	Remark

6 The table shows the minimum and maximum daily temperatures in six cities in January.

City	Minimum °C	Maximum °C
Paris	–1	12
London	–2	9
Barcelona	3	16
Moscow	–15	–1
Athens	0	15
Glasgow	–5	4

(a) Which city recorded the lowest **minimum** temperature?

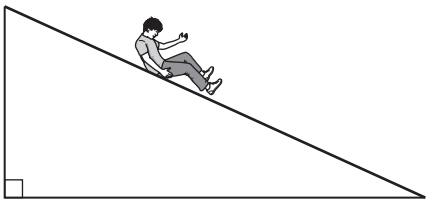
Answer _____ [1]

(b) What is the difference in °C between Glasgow's minimum and maximum temperatures?

Answer _____°C [1]

(c) Which two cities had the same difference between their minimum and maximum temperatures?

Answer _____ and _____ [1]

7 **(a)** 

David plays on a slide which has a ladder of vertical height 1.5 m and a sloped length of 3 m.

Using a scale of 1 m = 3 cm, construct, **as a right angled triangle**, a scale drawing to represent the slide.

[2]

(b) Measure the angle the sloped length makes with the ground.

Answer _____° [1]

Examiner Only	
Marks	Remark

Examiner Only	
Marks	Remark

8 **(a)** Calculate the size of angle a.

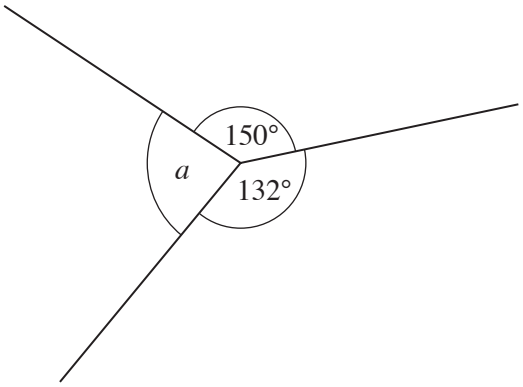


Diagram not drawn accurately

Answer a = _____° [2]

(b) A square just touches a triangle as shown.

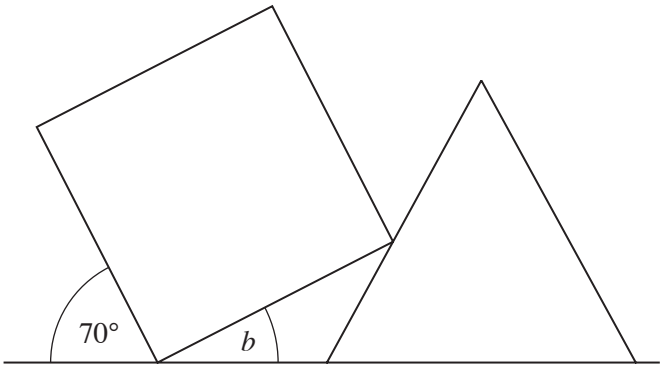


Diagram not drawn accurately

Calculate the size of angle b.

Answer b = _____° [2]

(c) Calculate the size of angle c.

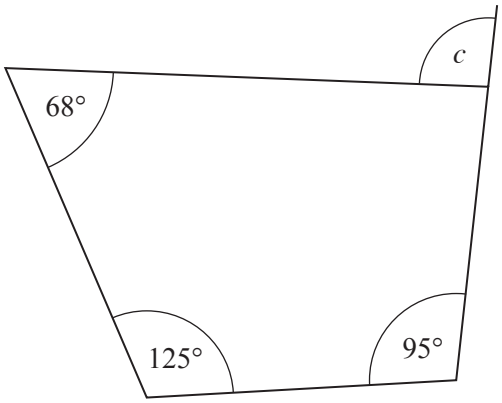


Diagram not drawn accurately

Answer c = _____° [3]

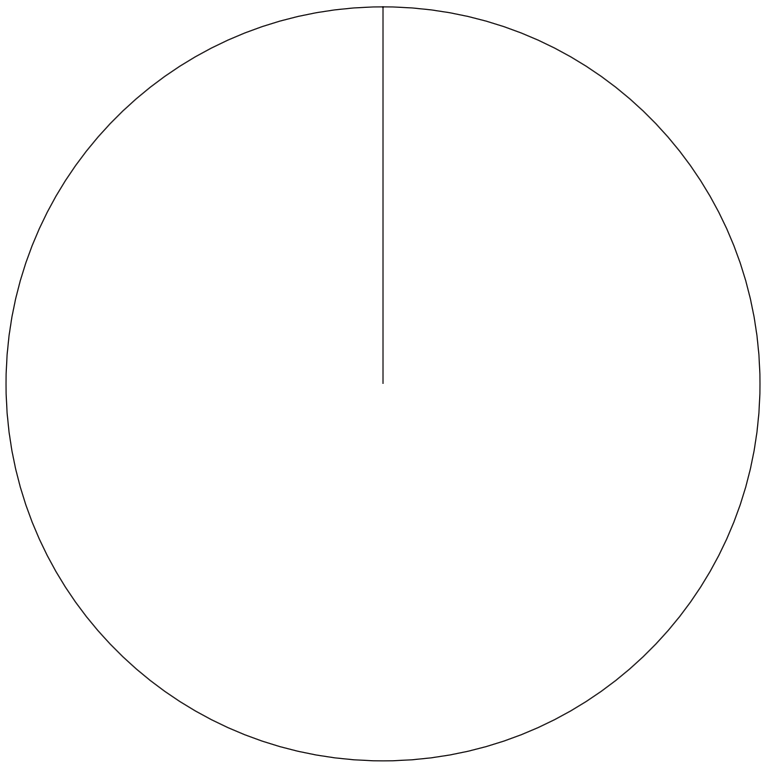
Examiner Only	
Marks	Remark

9 A travel agency recorded the types of holiday which were booked on a particular week.

The table below shows the results.

Type of Holiday	Frequency	Degrees
Bed & Breakfast	20	
Hotel half-board	22	
Self-catering	6	
Camping	12	

Complete an accurate pie chart below to show this information.



[4]

Examiner Only

Marks	Remark

10 Solve the equations

(a) $9x - 5 = 58$

Answer $x =$ _____ [2]

(b) $\frac{x}{8} = 3$

Answer $x =$ _____ [1]

Examiner Only	
Marks	Remark

Examiner Only	
Marks	Remark

11 A group of students take class tests in both English and Mathematics.

Each test is marked out of 50.

The stem and leaf diagrams below show the distribution of marks for both tests.

	English
0	
1	2 5 6 9
2	3 6 7 7 8
3	0 2 4 5 5
4	1 2 2 3 6
5	0

	Mathematics
0	9
1	0 1 2 6 7
2	1 3 4 5 7 8 8
3	2 5 7 9
4	1 4 8
5	

Key: 2 | 5 means 25

(a) Which subject has the bigger range of marks and by how much?

Answer _____ has the bigger range by _____ [2]

(b) Which subject has the bigger median mark and by how much?

Answer _____ has the bigger median mark by _____ [2]

THIS IS THE END OF THE QUESTION PAPER