

71
Candidate Num

General Certificate of Secondary Education January 2012

Mathematics



Module N1 Paper 1 (Non-calculator)
Foundation Tier

[GMN11]

9.15 am – 10.00 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 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						

Tradal	
l Total	
Marks	
Mains	

7368

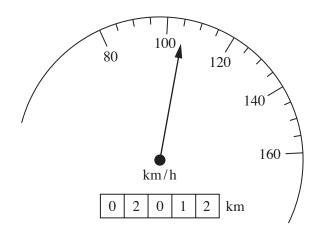
1 (a) Write down the volume of water in this measuring cylinder.

								70	ml
	-	_				_	_	_	
	_	_		_	_	_	_	60	_ <u>_</u>
 	_		_		_		_		_ <u>=</u>
		_	_	_	_	_			_ =
-	_		_		_			50	_

Answer ml [1]

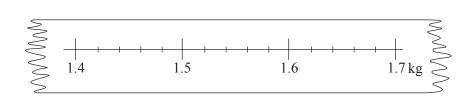
Examiner Only

(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]

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

Examiner Only					
Marks	Remark				

Monday	$\oplus \oplus \oplus$
Tuesday	$\oplus \oplus \oplus \oplus$
Wednesday	\oplus \oplus \Box
Thursday	$\oplus \oplus \oplus$
Friday	$\oplus \oplus \oplus \oplus$
Saturday	

	represents 4 members
1	
1	
l	
4	

(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?

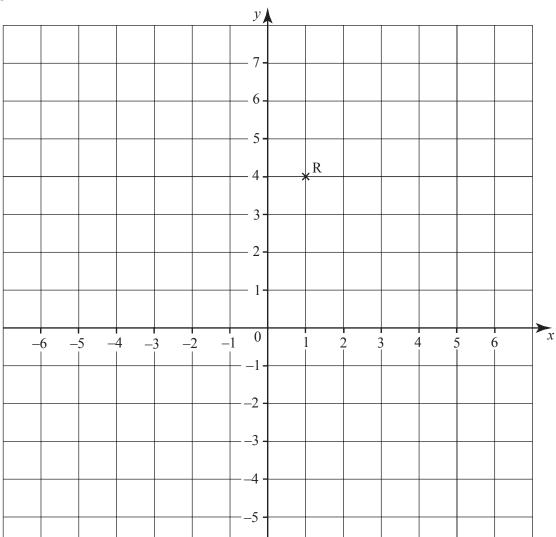
Answer _____ [1]

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

Show this on the pictogram.

[1]

3	(a)	Write 0.4 as a percentage.		Examiner Only Marks Remark
			Answer% [1]	
	(b)	Write 0.35 as a fraction.		
		Give your answer in its simp	plest form.	
	(c)	Write 5% as a decimal.	Answer [2]	
			Answer [1]	
4		-	4 5 6 8 9 10 12 14 17 21 25 35	
	Fro	m the numbers in the grid, wi	rite down:	
	(a)	the multiples of 3,	Answer [2]	
	(b)	the factors of 48,	Answer [2]	
	(c)	the prime numbers.	Answer [2]	



Examiner Only				
Remark				

(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).

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

Examiner Only					
Marks	Remark				

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?
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Answer _____ [1]

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

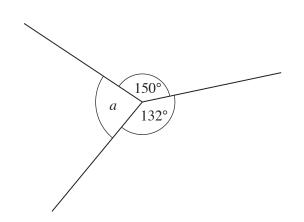
Answer _____°C [1]

(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.	Examiner Only Marks Remark
			Using a scale of 1 m = 3 cm, construct, as a right angled triangle, a scale drawing to represent the slide.	
			drawing to represent the since.	
			[2]	
			[2]	
	(b)	Measure the angle the sloped le	ength makes with the ground.	
			Answer° [1]	

8 (a) Calculate the size of angle a.



Answer $a =$	0	[2]

Diagram not drawn accurately

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

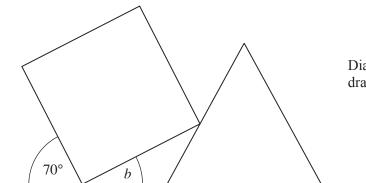


Diagram not drawn accurately

Calculate the size of angle *b*.

Answer $b = \underline{\hspace{1cm}}^{\circ} [2]$

(c) Calculate the size of angle c.

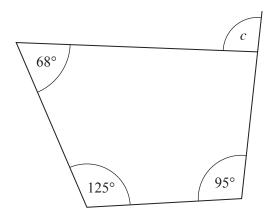


Diagram not drawn accurately

L -	Answer $c =$		[3]
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Examiner Only

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

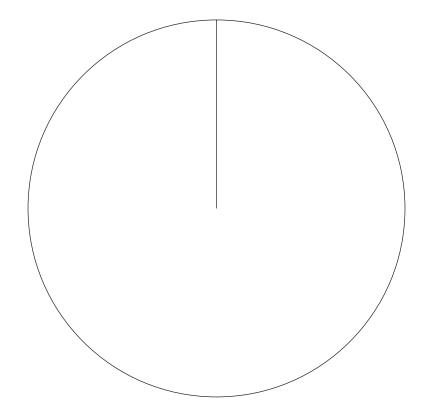
Examiner Only

Marks Remark

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]

- 10 Solve the equations
 - (a) 9x 5 = 58

	1
	1
	1
	1
	1
	1
	1
	1
	1

Answer $x = ____ [2]$

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

Answer $x = ____ [1]$

Examiner Only

11 A group of students take class tests in both English and Mathematics. **Examiner Only** Each test is marked out of 50. The stem and leaf diagrams below show the distribution of marks for both tests. English Mathematics 9 0 0 2 5 1 0 1 1 9 2 | 1 3 4 5 7 8 3 6 7 7 8 2 8 3 2 5 7 5 3 0 2 4 5 9 2 2 3 6 4 1 4 4 1 8 5 0 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







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