

General Certificate of Secondary Education January 2010

Mathematics



Module N2 Paper 2 (With calculator) Foundation Tier

[GMN22]

TUESDAY 12 JANUARY 10.30 am – 11.15 am





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.

The Formula Sheet is on page 2.

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

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Formula Sheet

Volume of prism = area of cross section × length





[Turn over

3	(a)		Diagram not drawn accurately	Examiner Only Marks Remark
		104°		
		x		
		Calculate the angle <i>x</i> in the isosceles triang	le.	
		Answe	r° [2]	
	(b)	A rectangle measures 6.8 cm by 2.6 cm. Calculate		
		(i) the area,		
		Answer	cm ² [2]	
		(ii) the perimeter of this rectangle.		
		Answer _	cm [1]	

4	A ta	axi firm operates with a number of cars and n minibuses.		Examin Marks	er Only Remark
	(a)	Each minibus can hold 13 passengers. Write an expression for the maximum number of passengers that can be transported by n minibuses.			Kemark
		Answer	[1]		
	(b)	The taxi firm has 16 times as many cars as minibuses. Write an expression for the number of cars the taxi firm has.			
		Answer	[1]		
	(c)	Each car can hold four passengers. Write an expression for the maximum number of passengers that can be transported using cars only.			
		Answer	[1]		
5413				[Tur	n over





7 Penny recorded the play time of each of the tracks on her iPod. The results are shown in the table below.

Time (<i>t</i> seconds)	$90 < t \le 120$	$120 < t \le 150$	$150 < t \le 180$	$180 < t \le 210$	$210 < t \le 240$
Frequency	22	35	18	10	6

(a) Show this information on a grouped frequency diagram.



			Examine	er Only
			Marks	Remark
		[3]		
(b) What is the modal class interval?				
А	Answer	[1]		



[Turn over

Examiner Only

9	Calculate the perimeter of a semicircle with diameter 8 cm.	Examine Marks	er Only Remark
	Answer [4]		
10	In September, Georgina received £600 commission on sales she had made that month. In October she received 15% less than September. In November her commission increased by 18% and in December by 25% on the previous month. How much commission did Georgina receive in December? Show all your working.		
	Answer £ [3]		

11	(a)	What type of correlation exists between the ages of cars and their mileage travelled?		Examiner Only Marks Remark
		Answer	[1]	
	(b)	(i) What type of correlation exists between the ages of cars and the value?	eir	
		Answer	. [1]	
		(ii) Sketch a scatter graph with at least six points to illustrate this correlation.		
		Va		
		Age	[1]	
	(c)	Write down a variable for cars which would have no correlation to ages of the cars.	the	
		Answer	. [1]	



THIS IS THE END OF THE QUESTION PAPER

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