

Surname					Other Names				
Centre Number					Candidate Number				
Candidate Signature									

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General Certificate of Secondary Education
March 2004



**MATHEMATICS (MODULAR) (SPECIFICATION B)
Module 1 Foundation Tier Section A**

33001/FA

F

Monday 1 March 2004 9.00 am to 9.25 am

<p>In addition to this paper you will require:</p> <ul style="list-style-type: none"> • a calculator • mathematical instruments • a treasury tag. 	
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For Examiner's Use			
Section A		Section B	
Number	Mark	Number	Mark
1		5	
2		6	
3		7	
4		8	
		9	
Total Section A			
Total Section B			
TOTAL			
Examiner's Initials			

Time allowed for Section A: 25 minutes

Instructions

- Use blue or black ink or ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions in the spaces provided.
- Do all rough work in this booklet.
- This paper is divided into **two** sections: Section A and Section B.
- After the 25 minutes allowed for Section A, you must put your calculator on the floor under your seat. You will then be given Section B.
- When you have answered Section B you may work again on Section A but you may **not** use your calculator. It must remain on the floor under your seat.
- At the end of the examination tag Section A and Section B together with Section A on top.

Information

- The maximum mark for Section A is 20.
- Mark allocations are shown in brackets.
- Additional answer paper and graph paper will be issued on request and must be tagged securely to this answer booklet.
- You are expected to use a calculator where appropriate.

Advice

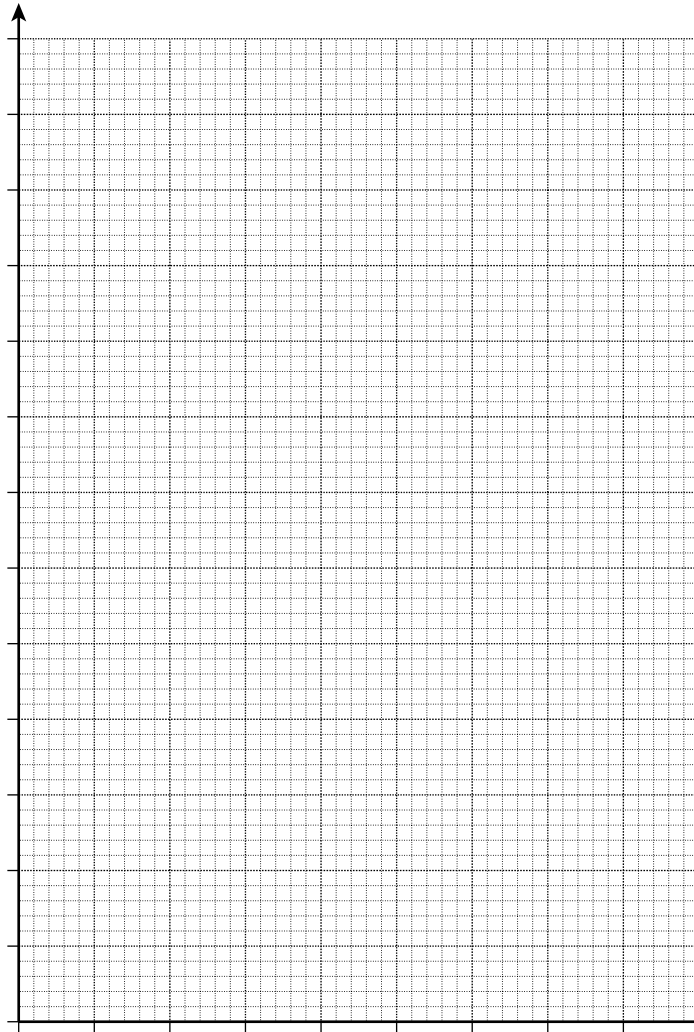
- In all calculations, show clearly how you work out your answer.

Answer **all** questions in the spaces provided.

- 1 Trevor has an ice-cream van.
He keeps a tally of his sales one day.

Item	Tally	Frequency
Lolly		
Cornet		
Tub		
Wafer		

- (a) Complete the frequency column. (1 mark)
- (b) Draw a bar chart for these data.

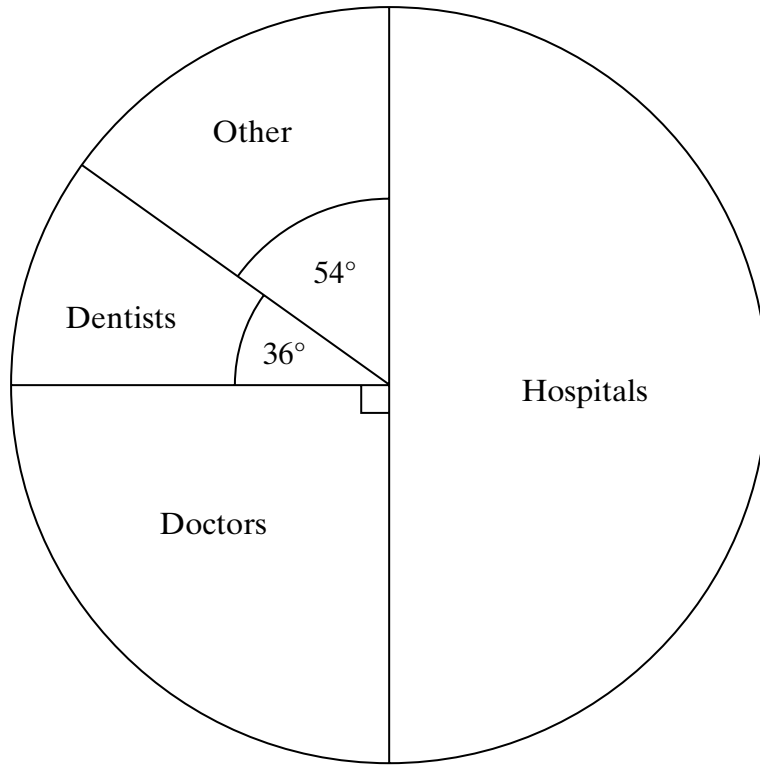


- (c) How many items were sold altogether? (3 marks)

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Answer (1 mark)

2 The pie chart shows the proportions of complaints made about different parts of the Health Service last year.



(a) What fraction of complaints were made about doctors?

.....

Answer (2 marks)

(b) There were 400 complaints made about hospitals.

How many complaints were made altogether?

.....

.....

Answer (2 marks)

(c) Work out the number of complaints made about dentists.

.....

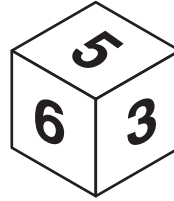
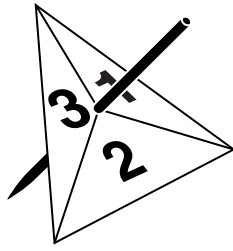
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Answer (3 marks)

Turn over ►



- 3 Idnan is playing a game with a fair triangular spinner labelled 1, 2 and 3 and a fair six-sided dice.



Idnan spins the spinner and throws the dice.

He adds the number that the spinner lands on to the number shown on the dice to get his score.

- (a) Complete the table to show all the scores that Idnan can get.

		Number shown on dice					
		1	2	3	4	5	6
Number spinner lands on	1						
	2						
	3						

(2 marks)

- (b) Write down the probability that Idnan scores 9.

Answer (1 mark)

$\frac{1}{3}$

- 4 Wentbridge College carried out a survey of the number of students in each Year 13 class during the first teaching period of a day.
The results were

15 16 18 22 21 14 11 16
14 23 13 20 19 14 18 9

- (a) Complete the stem and leaf diagram to show these results.

.....
.....
.....

Key | | represents students

0
1
2

(3 marks)

- (b) Wentbridge College wants to do a survey.

- (i) This is one of the questions.

Do you agree that Wentbridge College provides better facilities than Mill Dam College?

Give one criticism of this question.

.....
.....

(1 mark)

- (ii) The survey is only carried out with students at Wentbridge College.

Give a reason why this is **not** suitable.

.....
.....

(1 mark)

END OF SECTION A

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General Certificate of Secondary Education
March 2004



**MATHEMATICS (MODULAR) (SPECIFICATION B)
Module 1 Foundation Tier Section B**

33001/FB

F

Monday 1 March 2004 9.30 am to 9.55 am

<p>In addition to this paper you will require: mathematical instruments.</p> <p>You must not use a calculator.</p>	
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Time allowed for Section B: 25 minutes

Instructions

- Use blue or black ink or ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions in the spaces provided.
- Do all rough work in this booklet.
- You may **not** use your calculator in Section B. Your calculator must remain on the floor under your seat.
- When you have answered Section B you may work again on Section A but you may **not** use your calculator. It must remain on the floor under your seat.
- At the end of the examination tag Section A and Section B together with Section A on top.

Information

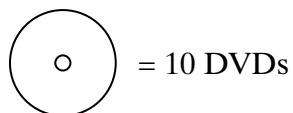
- The maximum mark for Section B is 20.
- Mark allocations are shown in brackets.
- Additional answer paper and graph paper will be issued on request and must be tagged securely to this answer booklet.

Advice

- In all calculations, show clearly how you work out your answer.

Answer **all** questions in the spaces provided.

- 5 The pictogram shows the number of DVDs owned by each of four friends.



Gerry	
Jack	
Tom	
Harry	

- (a) Who owns the most DVDs?

Answer (1 mark)

- (b) How many more DVDs does Gerry own than Harry?

.....

Answer (1 mark)

$\frac{\quad}{2}$

6 Gill asks each of her friends to record how many text messages they receive one day. Here are the results.

1 2 1 0 4 36 3 0 2 1

(a) Write down the mode.

.....

Answer (1 mark)

(b) Find the median.

.....

Answer (2 marks)

(c) Calculate the range of these data.

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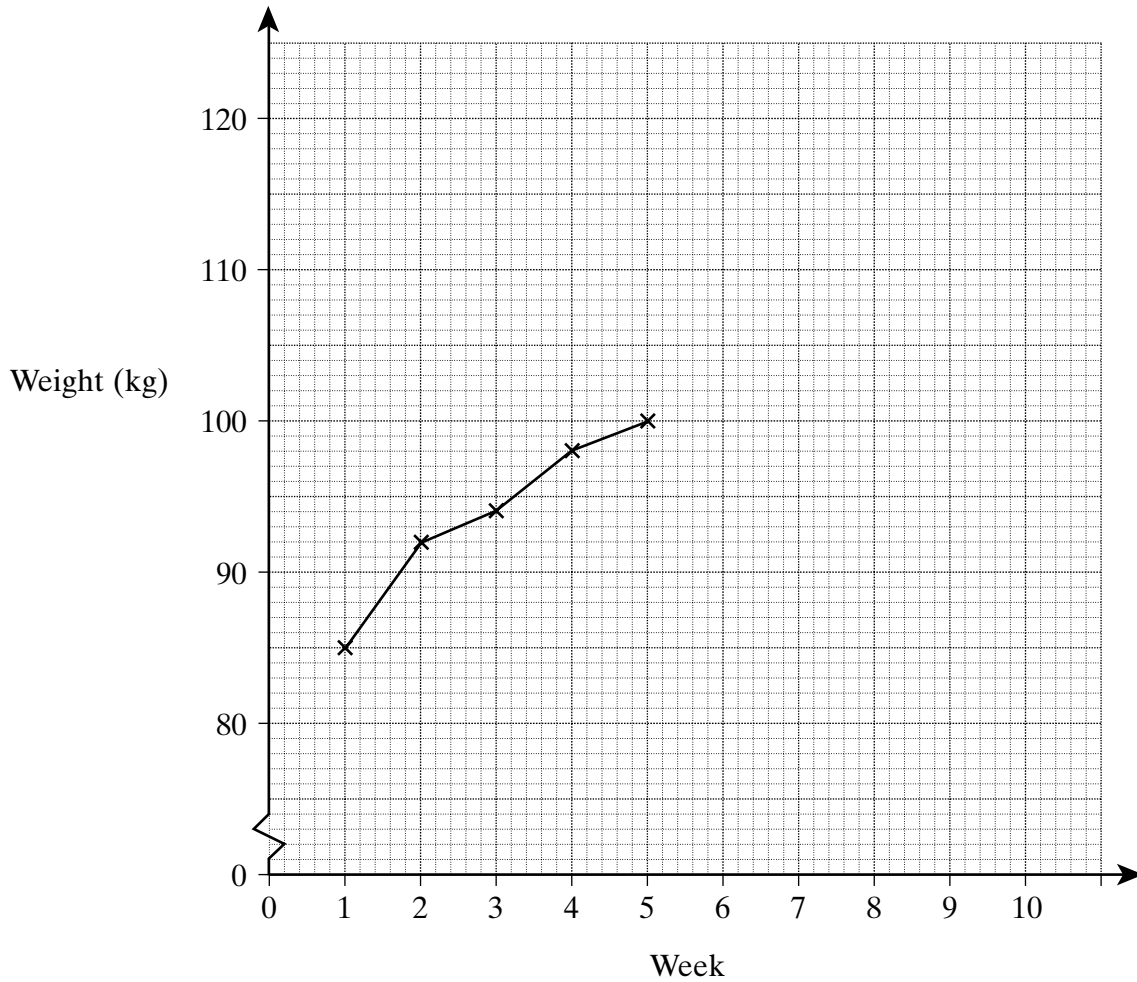
Answer (1 mark)



TURN OVER FOR THE NEXT QUESTION

Turn over

- 7 A baby elephant is weighed at the end of each week.
The graph shows the weight of the elephant.
At the end of week 5 the elephant weighed 100 kg.



- (a) At the end of week 6 the elephant weighed 104 kg.

At the end of week 10 the elephant weighed 120 kg.

- (i) Plot these points on the graph. *(2 marks)*
- (ii) Complete the graph with straight lines. *(1 mark)*
- (b) Use your graph to estimate the weight of the elephant at the end of week 8.

Answer kg *(1 mark)*

8 Susan and Jill play a game.

- (a) Susan has a box containing 3 red, 4 yellow and 2 blue counters.
She picks a counter at random.

What is the probability that Susan picks a yellow counter?

.....

Answer (2 marks)

- (b) Jill has a box containing 18 counters of which 8 are yellow.
She picks a counter at random.

What is the probability that Jill does **not** pick a yellow counter?

.....

Answer (2 marks)

- (c) Who is more likely to pick a yellow counter?
Tick the correct box.
Explain your answer.

Susan

Jill

Neither

Explanation

.....

.....

(2 marks)

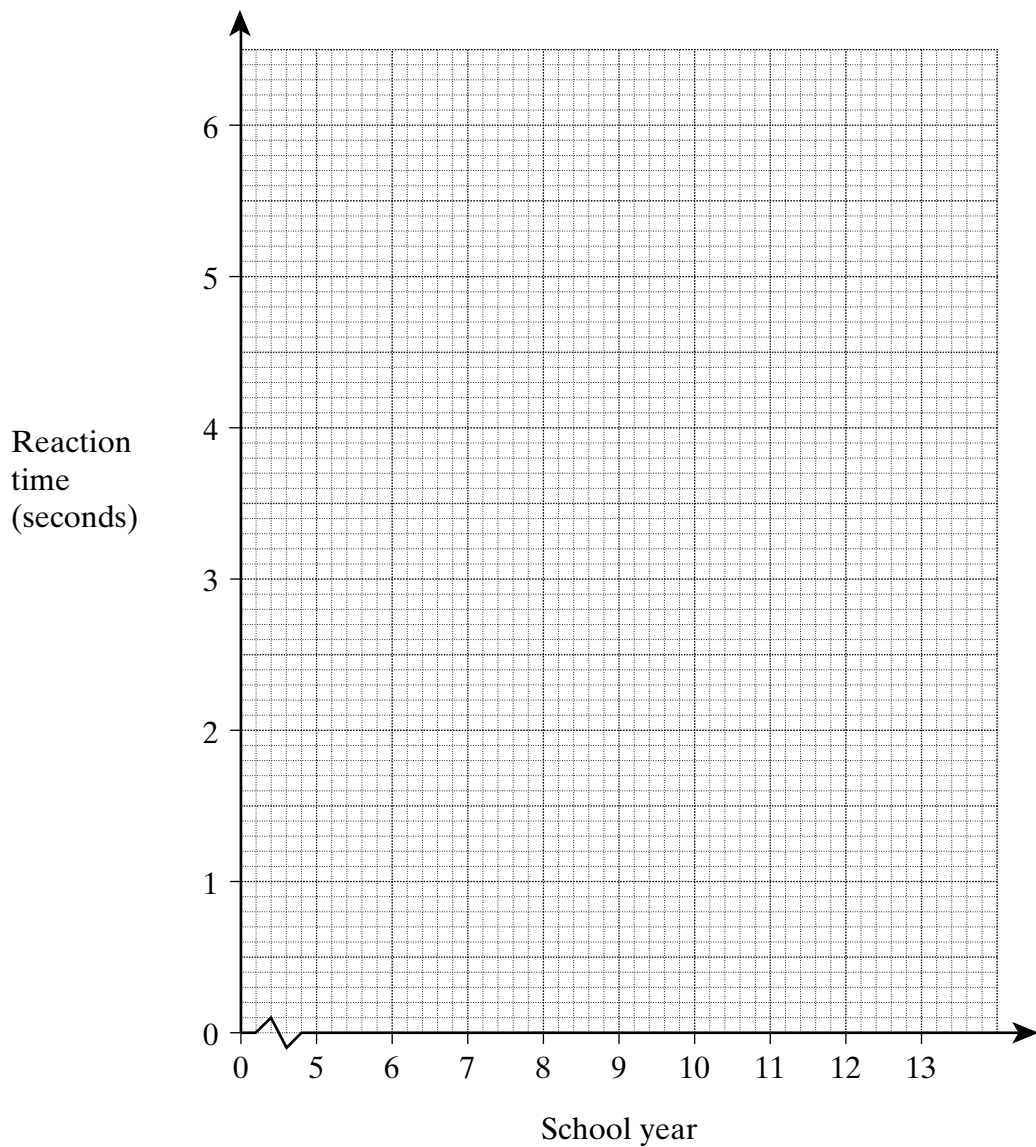
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Turn over ►

- 9 The table shows the school year and the reaction time of eight people who took part in the same test.

School year	5	7	8	9	10	11	11	13
Reaction time (seconds)	6	5	4.8	4.5	4	4.2	3.5	3

- (a) Draw a scatter graph of these data.



- (b) Draw a line of best fit on your scatter graph.

(1 mark)

(c) Describe the relationship shown by your scatter graph.

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(1 mark)

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4

END OF QUESTIONS