

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

General Certificate of Secondary Education
June 2004



MATHEMATICS (MODULAR) (SPECIFICATION B) 33001/IB
Module 1 Intermediate Tier Section B

Thursday 17 June 2004 2.00 pm to 2.25 pm



<p>In addition to this paper you will require: mathematical instruments. You must not use a calculator.</p>	
---	--

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** A group of 40 children are asked how many dogs and cats they own.
The results are shown in the table.

		Number of dogs			
		0	1	2	3
Number of cats	0	5	7	3	1
	1	6	3	2	0
	2	7	2	1	0
	3	2	1	0	0

- (a) How many children own two cats but no dog?

.....

Answer (1 mark)

- (b) How many children own two dogs?

.....

.....

Answer (1 mark)

- (c) How many children own a total of three of these animals?

.....

.....

Answer (2 marks)

- 6 The stem and leaf diagram shows the number of miles travelled by a salesman each day for 14 days.

Key 5 | 2 represents 52 miles

1		2	3				
2		3	6				
3		5	7	7	8		
4		1	3	4	8		
5		2	5				

Find the median number of miles travelled per day.

.....

.....

Answer miles (2 marks)



TURN OVER FOR THE NEXT QUESTION

Turn over ►

7 Michelle wants to find out if students buy lunch in the college restaurant, bring a packed lunch or go out of college for lunch.

(a) (i) Design an observation sheet for Michelle to record the data.

(2 marks)

(ii) Complete your observation sheet by inventing data for 20 students.

(1 mark)

(b) Michelle decides to stand outside the college restaurant at 12 noon to collect her data.

Give a reason why this is **not** a suitable place to carry out this survey.

.....

.....

.....

(1 mark)

- 8 Twenty pupils each shuffle a pack of coloured cards and choose a card at random. The colour of the card is recorded for each pupil.

(R = Red B = Blue G = Green Y = Yellow)

B	Y	Y	G	R
G	R	Y	B	B
Y	R	B	B	Y
B	B	G	R	Y

- (a) Use these results to calculate the relative frequency of each colour.

.....

.....

.....

.....

Colour	Red	Blue	Green	Yellow
Relative frequency				

(2 marks)

- (b) Use the results to calculate how many times you would expect a blue card if 100 pupils each choose a card at random.

.....

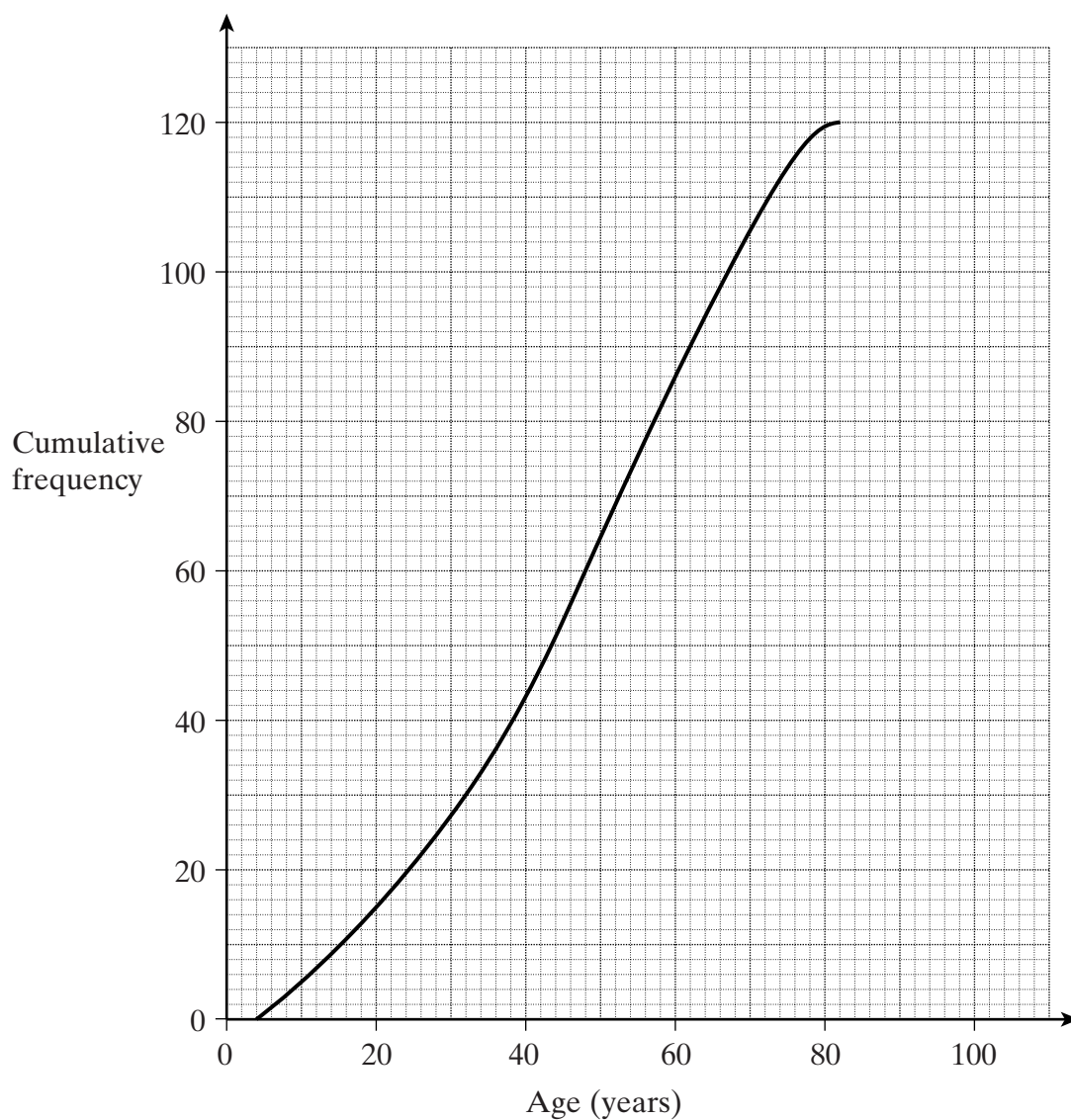
.....

Answer (2 marks)

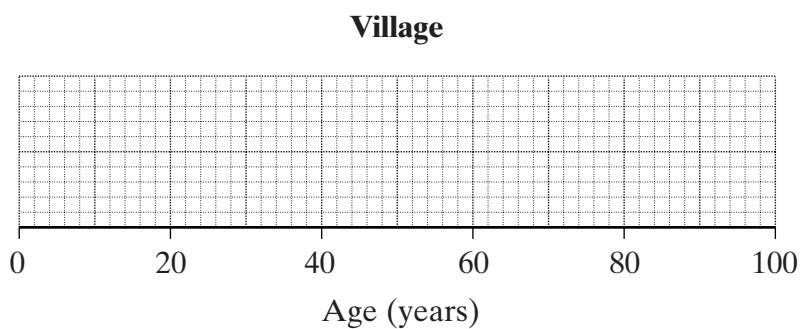


Turn over ►

- 9 The ages of all the people in a small village are recorded.
The youngest person is 4 years old and the oldest person is 82 years old.
The information is shown on the cumulative frequency diagram.

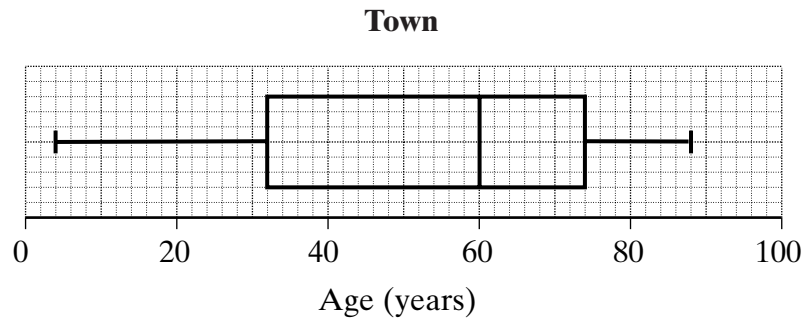


- (a) Draw a box plot for these data.



(4 marks)

- (b) The box plot below shows the ages of all the people in a town.



Write down **two** differences between the ages of the people in the village and the people in the town.

Difference 1

.....

.....

Difference 2

.....

.....

(2 marks)

6

END OF QUESTIONS

THERE ARE NO QUESTIONS PRINTED ON THIS PAGE