Surname		Other Names	
Centre Number			Candidate Number									
Candidate Signature												

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General Certificate of Secondary Education
November 2004

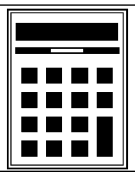
ASSESSMENT and QUALIFICATIONS ALLIANCE

MATHEMATICS (MODULAR) (SPECIFICATION B) 33001/FA
Module 1 Foundation Tier Section A

F

Wednesday 17 November 2004 1.30 pm to 1.55 pm

In addition to this paper you will require:
- a calculator
- mathematical instruments
- a treasury tag.



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.

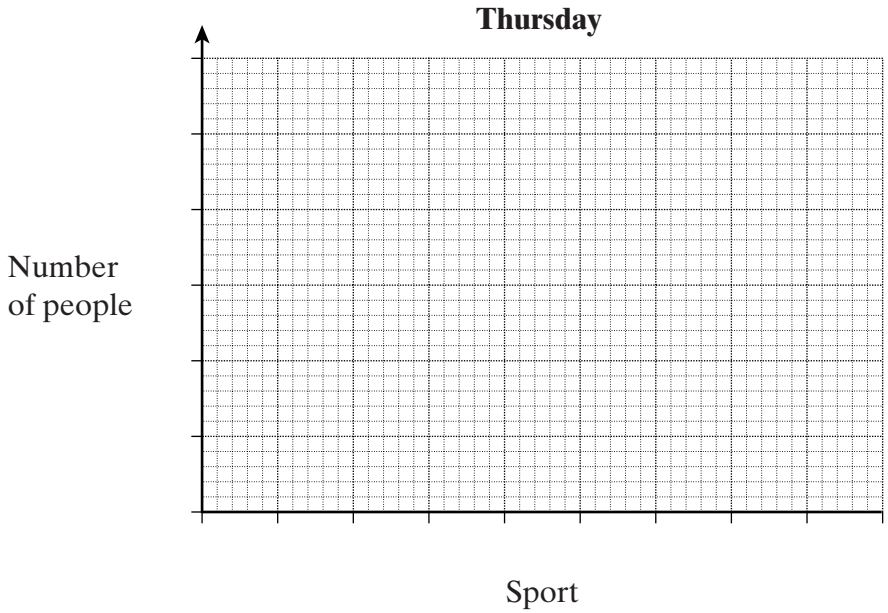
For Examiner's Use			
Section A		**Section B**	
Number	Mark	Number	Mark
1		5	
2		6	
3		7	
4		8	
		9	
Total Section A			
Total Section B			
TOTAL			
Examiner's Initials			

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

1 Donna counted the number of people playing each sport one Thursday at her local gym. The table shows her results.

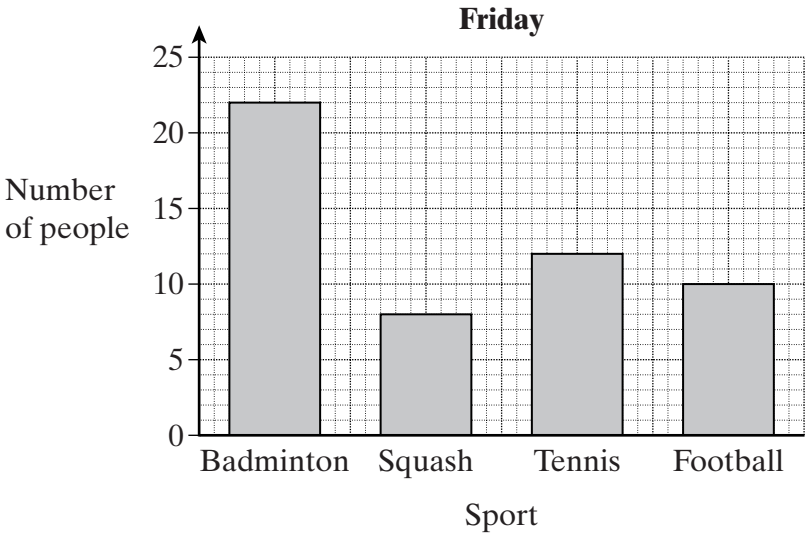
Sport	Number of people
Badminton	12
Squash	24
Tennis	8
Football	20

(a) Draw a bar chart to show Donna's results.



(3 marks)

(b) On the next day, Friday, Donna repeated her count.
The bar chart below shows the number of people playing each sport.



Calculate the total number of people playing sport at the gym on Friday.

.....

.....

Answer ..... *(2 marks)*

(c) How many more people played squash on Thursday than on Friday?

.....

.....

Answer ..... *(2 marks)*

7

2 The Quickpass driving school records the number of lessons that each person had before passing their driving test.
The results for seven men are shown.

10 17 15 10 12 8 19

(a) Work out the range of these numbers.

.....

Answer ..... *(1 mark)*

(b) Calculate the mean of these numbers.

.....

.....

.....

Answer ..... *(3 marks)*

(c) The number of driving lessons taken by a sample of women is summarised in the table.

Women

Range	14
Mean	9

Write down **two** comparisons between the number of driving lessons taken by the men and the women.

Comparison 1 .....

.....

Comparison 2 .....

.....

(2 marks)

6

3 Sami keeps her credit card receipts in a drawer until her statement arrives. The table shows the number of each type of receipt in the drawer.

Petrol	Groceries	Hotels	Rail fares	Other
5	8	1	2	4

Sami picks a receipt at random from the drawer.

What is the probability that the receipt she picks is

(a) for hotels,

.....

Answer ..... *(2 marks)*

(b) **not** for hotels?

.....

Answer ..... *(1 mark)*

3

TURN OVER FOR THE NEXT QUESTION

4 A charity sells raffle tickets for 50p each.
The winning prize is £100.

50 people bought 1 ticket each.

80 people bought 2 tickets each.

70 people bought 3 tickets each.

95 people bought 4 tickets each.

40 people bought 5 tickets each.

Calculate how much profit the charity made on this raffle.

.....

.....

.....

.....

.....

.....

.....

Answer £ ..... *(4 marks)*

4

END OF SECTION A

Surname		Other Names	
Centre Number						Candidate Number				
Candidate Signature										

General Certificate of Secondary Education
November 2004

ASSESSMENT and QUALIFICATIONS ALLIANCE

MATHEMATICS (MODULAR) (SPECIFICATION B) 33001/FB
Module 1 Foundation Tier Section B

F

Wednesday 17 November 2004 2.00 pm to 2.25 pm

In addition to this paper you will require: mathematical instruments. You must **not** use a calculator.	

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.

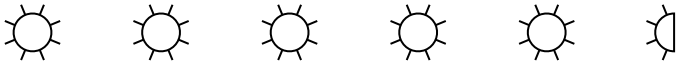
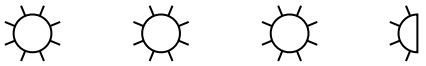
Advice

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

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

5 Danny records the number of hours of sunshine each day.
Some of his results are shown below.

 = 2 hours of sunshine

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

(a) How many more hours of sunshine were there on Monday than on Tuesday?

.....

Answer ..... hours *(1 mark)*

(b) On Saturday Danny recorded 5 hours of sunshine.

Complete the pictogram above.

(2 marks)

3

6 Twelve adults were asked how many keys were on their key-ring.
Their replies were

8 6 4 9 4 7 6 3 4 6 4 2

(a) Work out the median number of keys.

.....

.....

Answer ..... *(2 marks)*

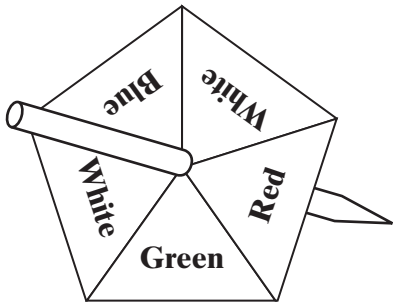
(b) Write down the mode.

Answer ..... *(1 mark)*

3

TURN OVER FOR THE NEXT QUESTION

7 A fair five-sided spinner has one section coloured red, one blue, one green and two white.



The spinner is spun once.

(a) (i) Which is the most likely colour that the spinner will land on?

Answer ..... *(1 mark)*

(ii) What is the probability that the spinner lands on red?

Answer ..... *(1 mark)*

(b) Write down the probability of each of the following events:

(i) throwing a fair coin and getting a head,

Answer ..... *(1 mark)*

(ii) throwing a five with a fair six-sided dice,

Answer ..... *(1 mark)*

(iii) picking a black pen from a box of blue pens.

Answer ..... *(1 mark)*

5

8 The number of letters received each day by a school is shown in the ordered stem-and-leaf diagram below.

Key 1 | 8 represents 18 letters

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

(a) On how many days did the school receive 6 letters?

Answer ..... *(1 mark)*

(b) What was the highest number of letters received?

.....

Answer ..... *(1 mark)*

(c) When the number of letters for another day is included in the data, the range increases by 1.

How many letters did the school receive on that day?
Write down the **two** possible answers.

.....

.....

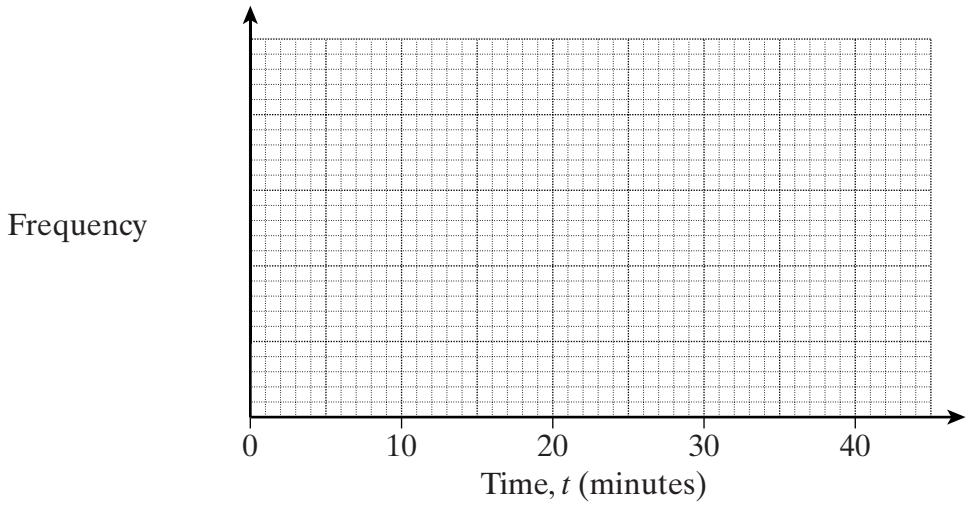
Answer ..... *(2 marks)*

4

9 A manager recorded how long each customer spent in his shop.
The table shows his results.

Time, t (minutes)	**Frequency**
$0 < t \leqslant 10$	4
$10 < t \leqslant 20$	22
$20 < t \leqslant 30$	18
$30 < t \leqslant 40$	12

(a) Draw a frequency diagram to represent this data.



(3 marks)

(b) Which class interval is the modal class?

Answer ..... $<$ t $\leqslant$ ..... *(1 mark)*

(c) As each customer left the shop the manager gave them a questionnaire containing the following question.

Question:	How much money did you spend in the shop today?			
Response:	Less than £10 ☐	Less than £20 ☐	Less than £30 ☐	£30 or more ☐

Write down one reason why the response section of this question is not suitable.

.....

.....

(1 mark)

5

END OF QUESTIONS