Surname		Other Names	
Centre Number			Candidate Number									
Candidate Signature												

For Examiner's Use

General Certificate of Secondary Education
November 2006

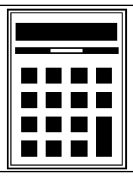
MATHEMATICS (MODULAR) (SPECIFICATION B) 43001/FA
Module 1 Foundation Tier Section A

F

Monday 13 November 2006 1.30 pm to 1.55 pm

TWO TIER

For this paper you must have:
- a calculator
- mathematical instruments
- a treasury tag.



For Examiner's Use			
Section A		**Section B**	
Question	Mark	Question	Mark
1		6	
2		7	
3		8	
4		9	
5		10	
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.
- Answer the questions in the spaces provided.
- Use a calculator where appropriate.
- Do all rough work in this book.
- 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.
- The marks for questions are shown in brackets.
- You may ask for more answer paper and graph paper. These must be tagged securely to this answer book.

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

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

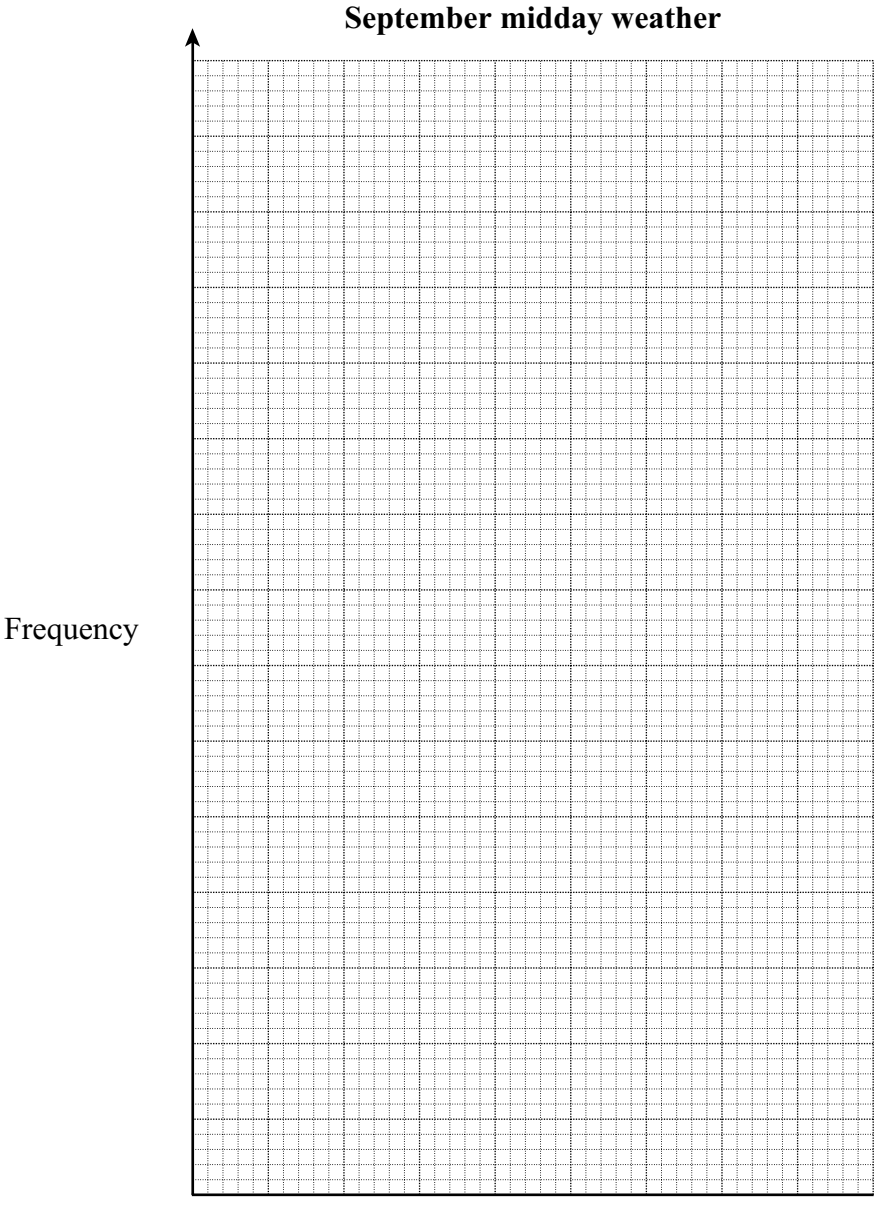
1 Mary records the weather at midday for 30 days in September.

(a) Complete the tally and frequency columns.

Midday weather	Tally	Frequency
Sunny	𝍸 𝍸 |	
Cloudy		9
Raining	𝍸 ||	

(2 marks)

(b) Draw a bar chart to show this information.

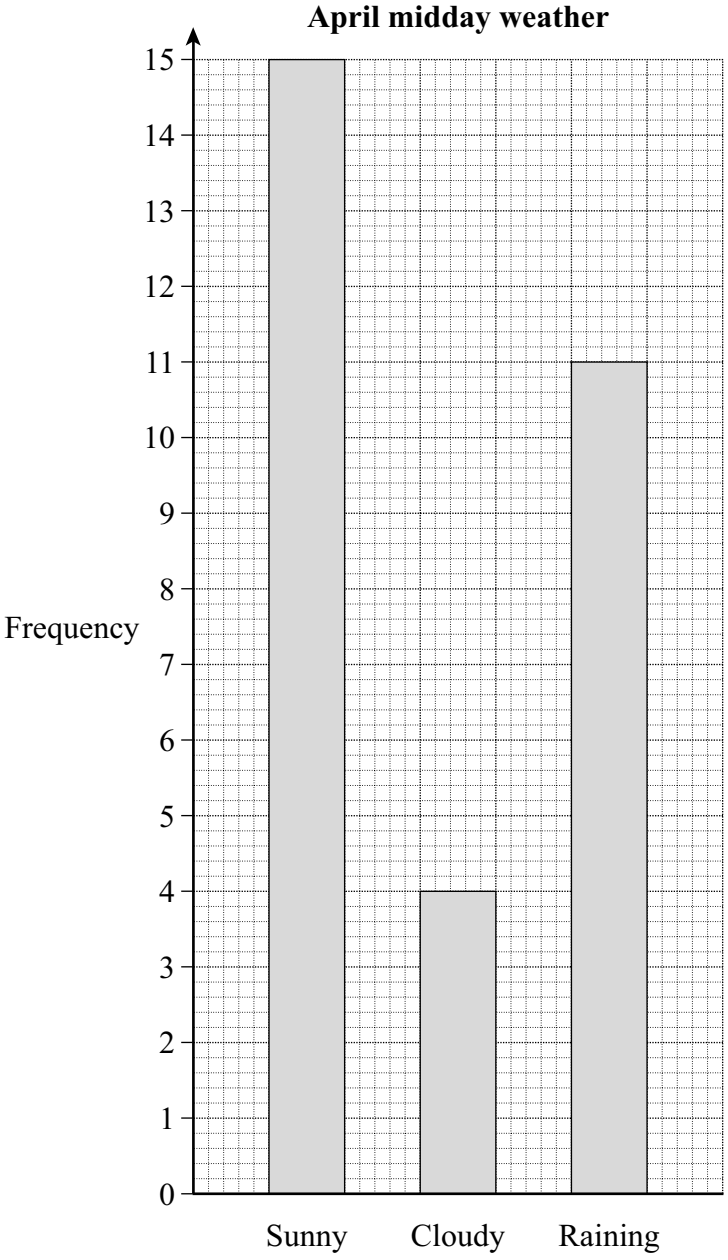


(3 marks)

(c) What was the most common type of September midday weather?

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

(d) A bar chart for the midday weather in April is shown below.



Write down **one** similarity between the midday weather in September and April.

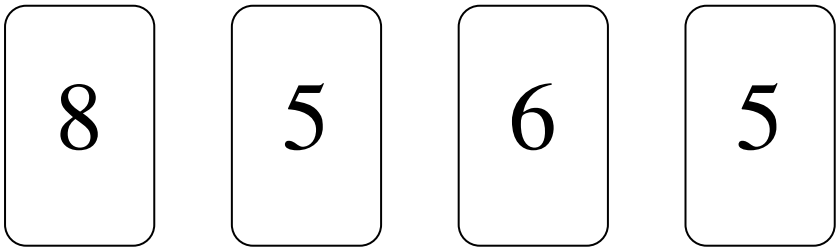
.....

.....

(1 mark)

7

2 Here are four cards.



James says that the mean of the numbers on the cards is higher than the mode.

Show that James is correct.

.....

.....

.....

.....

.....

(3 marks)

3

3 The number of visitors to a garden centre is recorded for 20 days.
The results are shown in the ordered stem-and-leaf diagram.

Key 5 | 2 represents 52 visitors

5	2	3	6	8	9		
6	0	1	2	3	5	7	8
7	0	3	4	6	8	9	
8	1	3					

(a) What was the greatest number of visitors to the garden centre on one day?

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

(b) Calculate the median number of visitors to the garden centre.

.....

.....

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

3

Turn over for the next question

4 A snack bar only sells crisps, chocolate bars, drinks and fruit.
Every day Moneeb buys one item from the snack bar.
The table shows the probabilities of Moneeb buying certain items.

Snack	**Probability**
Crisps	0.50
Chocolate bar	0.25
Drink	0.15
Fruit	

(a) What is the probability that Moneeb buys a chocolate bar or a drink?

.....

.....

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

(b) What is the probability that Moneeb buys fruit?

.....

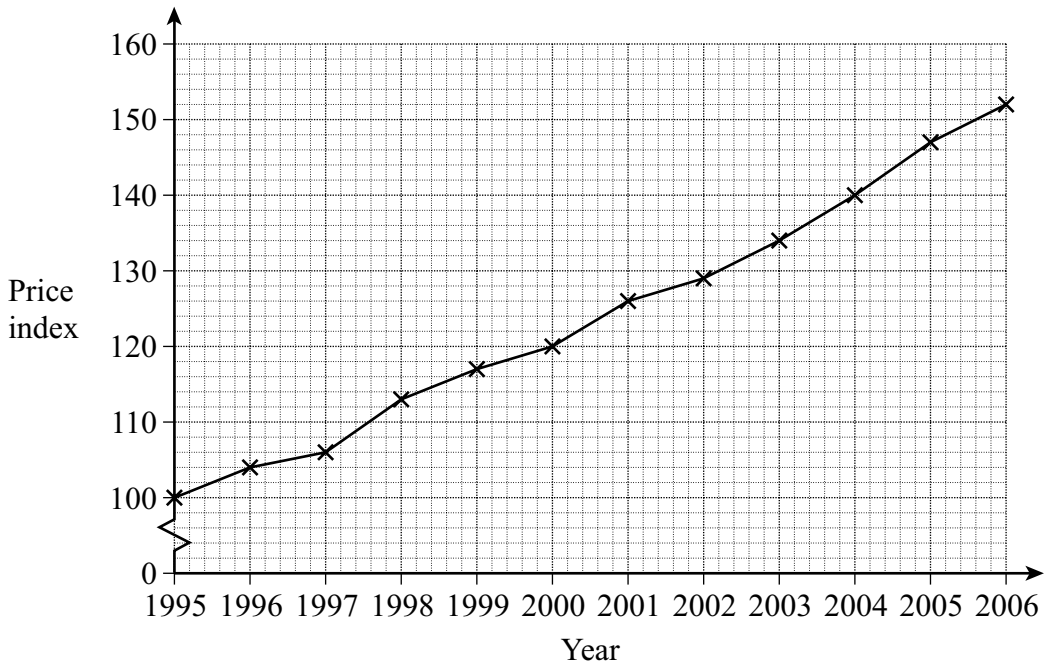
.....

.....

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

4

5 The graph shows the price index of the colour TV licence from 1995 to 2006.



The base year is 1995.

(a) In which year was the price of the licence 20% more than the price in 1995?

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

(b) What was the percentage increase in the price of the licence from 1995 to 2006?

.....

.....

.....

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

3

END OF SECTION A

There are no questions printed on this page

Surname		Other Names	
Centre Number						Candidate Number				
Candidate Signature										

General Certificate of Secondary Education
November 2006

ASSESSMENT and QUALIFICATIONS ALLIANCE

MATHEMATICS (MODULAR) (SPECIFICATION B) **43001/FB**
Module 1 Foundation Tier Section B

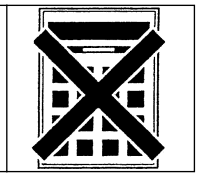
F

Monday 13 November 2006 2.00 pm to 2.25 pm

TWO TIER

For this paper you must have:
- 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.
- Answer the questions in the spaces provided.
- Do all rough work in this book.
- 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.
- The marks for questions are shown in brackets.
- You may ask for more answer paper and graph paper. These must be tagged securely to this answer book.

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

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

6 The boxes show some events.

Write one of the following words below each box to describe the chance of the event happening.

IMPOSSIBLE UNLIKELY EVENS LIKELY CERTAIN

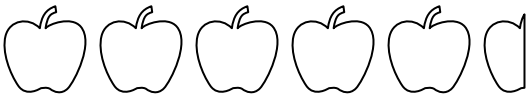
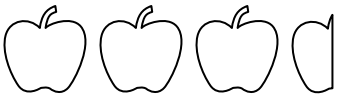
A person living to the age of 100 years	An ordinary six-sided dice landing on a number less than 7	There will be eight Sundays next month
.....	.....	.....

(3 marks)

3

7 The pictogram shows how many pieces of fruit Jane has eaten each week.

 represents 2 pieces of fruit

Week 1	
Week 2	
Week 3	
Week 4	
Week 5	

(a) In which week did Jane eat the least pieces of fruit?

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

(b) How many pieces of fruit did Jane eat in Week 1?

.....

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

(c) Calculate the range of the number of pieces of fruit that Jane eats over these five weeks.

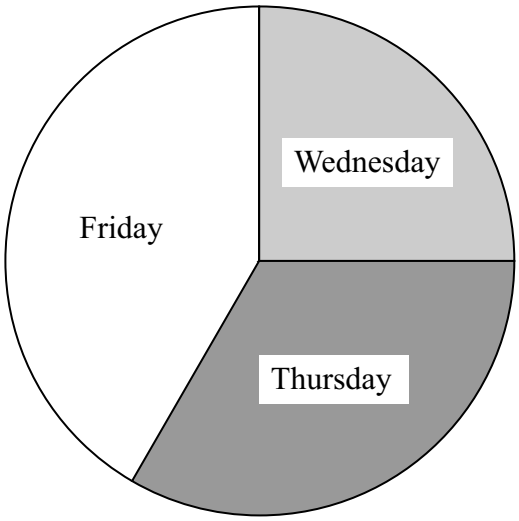
.....

.....

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

4

8 The pie chart shows the ticket sales for a school play.



(a) Which day has the most ticket sales?

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

(b) Write down the angle of the sector for Wednesday.

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

(c) What fraction of the ticket sales are for Wednesday?

.....

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

(d) The total profit from the school play was £720.
The table shows how the profit was raised.

	Profit (£)
Tickets	320
Refreshments	250
Car park	150
Total	720

Draw and label a pie chart to show this information.

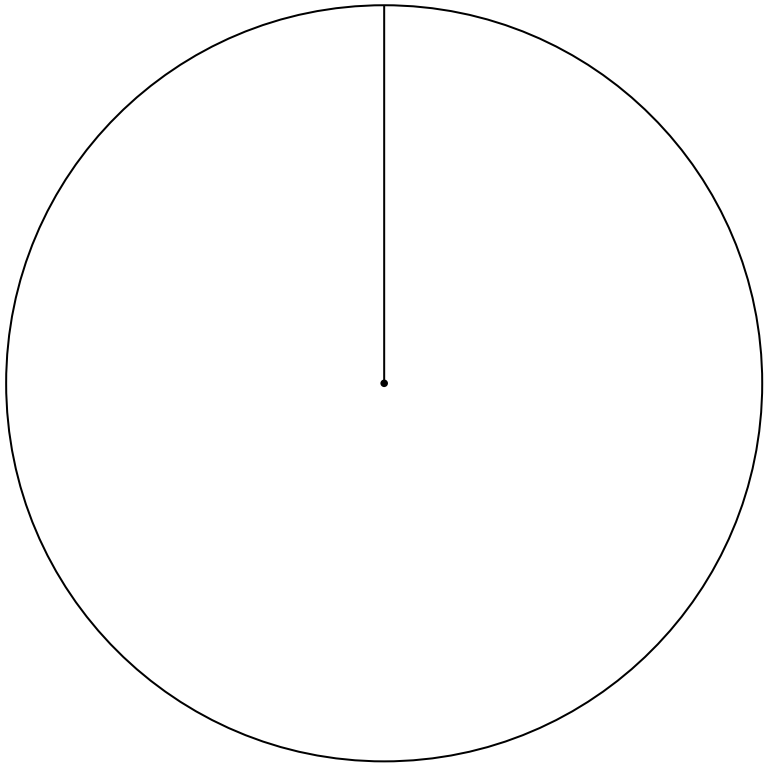
.....

.....

.....

.....

Profit from school play



(4 marks)

(e) A questionnaire was given to each person in the audience.
Here is one of the questions.

Did you think the play was	very good	good
Tick one box.	☐	☐

Explain why this is not suitable.

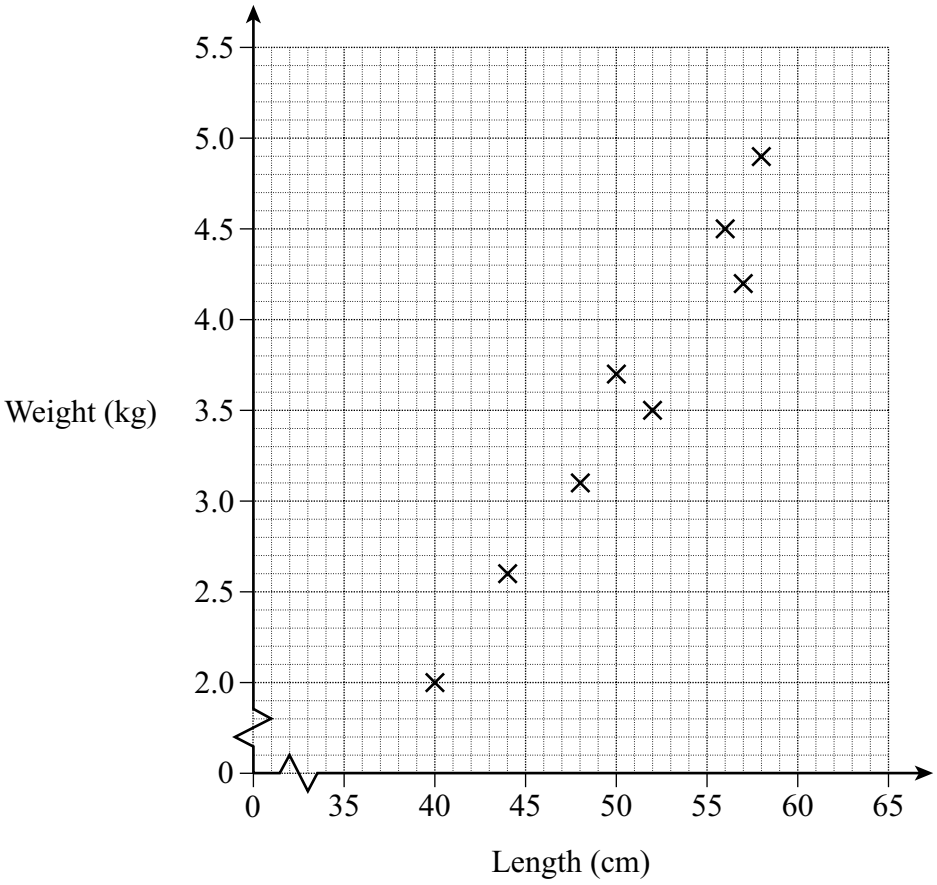
.....

.....

(1 mark)

8

9 The scatter graph shows the lengths, in centimetres (cm), and the weights, in kilograms (kg), of eight newborn babies.



(a) Draw a line of best fit on the scatter graph.

(1 mark)

(b) Use your line of best fit to estimate the weight of a newborn baby whose length is 54 cm.

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

2

10 Phil wants to test if a six-sided dice is biased.
He rolls the dice 20 times.
Here are his results.

2	3	5	6	1	2	4	5	6	2
3	4	2	1	2	3	5	6	2	1

(a) Complete the relative frequency table.

.....

.....

.....

Number	1	2	3	4	5	6
Relative frequency						

(2 marks)

(b) Phil concludes that the dice is biased towards a number.

Write down the number that you think the dice is biased towards.
Explain your answer.

Number .....

Explanation .....

.....

.....

(1 mark)

3

END OF QUESTIONS

There are no questions printed on this page