

|                     |  |  |  |  |  |                  |  |  |  |  |  |
|---------------------|--|--|--|--|--|------------------|--|--|--|--|--|
| Surname             |  |  |  |  |  | Other Names      |  |  |  |  |  |
| Centre Number       |  |  |  |  |  | Candidate Number |  |  |  |  |  |
| Candidate Signature |  |  |  |  |  |                  |  |  |  |  |  |

|             |
|-------------|
| Leave blank |
|-------------|

General Certificate of Secondary Education  
November 2006



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

**33001/FA**  
**F**

Monday 13 November 2006 1.30 pm to 1.55 pm

|  |  |
|--|--|
| <p><b>For this paper you must have:</b></p> <ul style="list-style-type: none"> <li>• a calculator</li> <li>• mathematical instruments</li> <li>• a treasury tag</li> </ul> |  |
|--|--|

| For Examiner's Use  |      |           |      |
|---------------------|------|-----------|------|
| Section A           |      | Section B |      |
| Number              | Mark | Number    | Mark |
| 1                   |      | 5         |      |
| 2                   |      | 6         |      |
| 3                   |      | 7         |      |
| 4                   |      | 8         |      |
| 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.

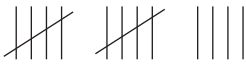

**Advice**

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

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

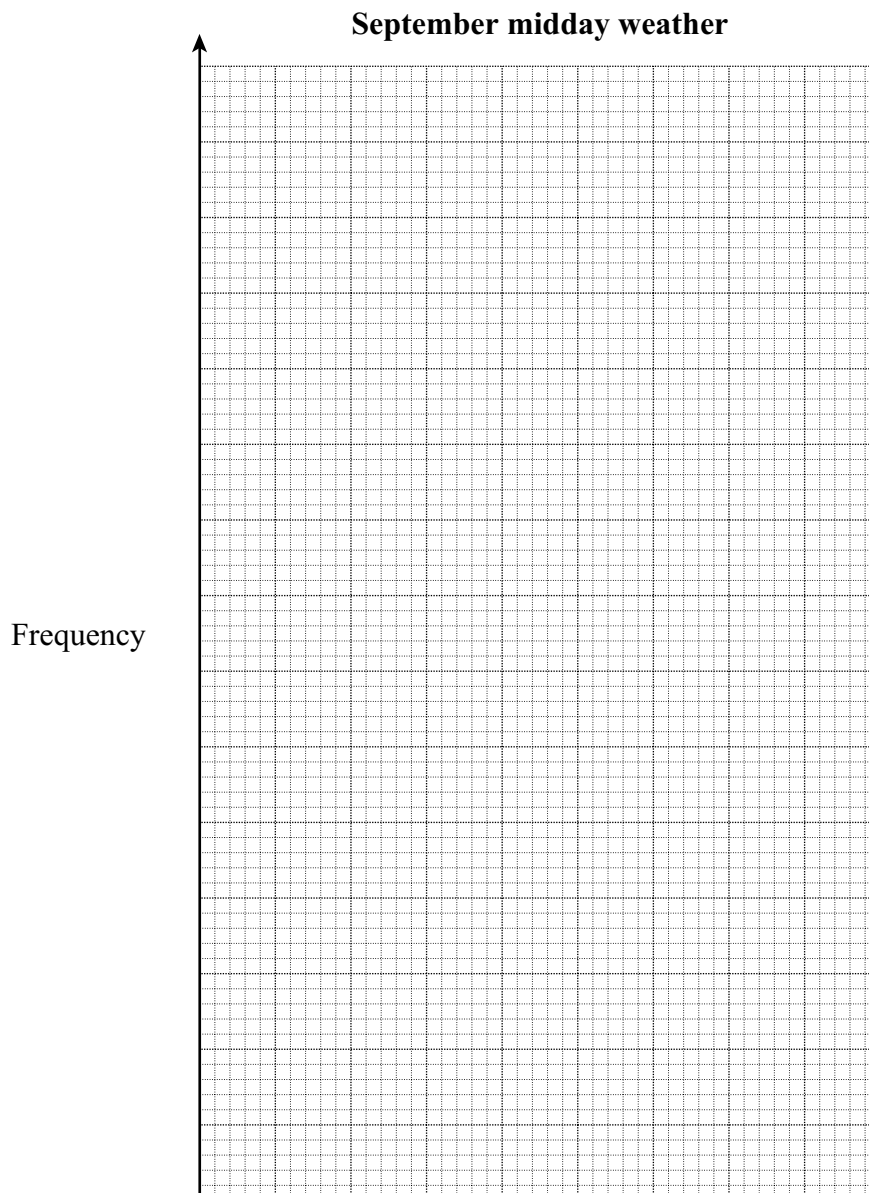
1 Mary records the weather at midday for 30 days in September.

(a) Complete the tally and frequency columns.

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

(2 marks)

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

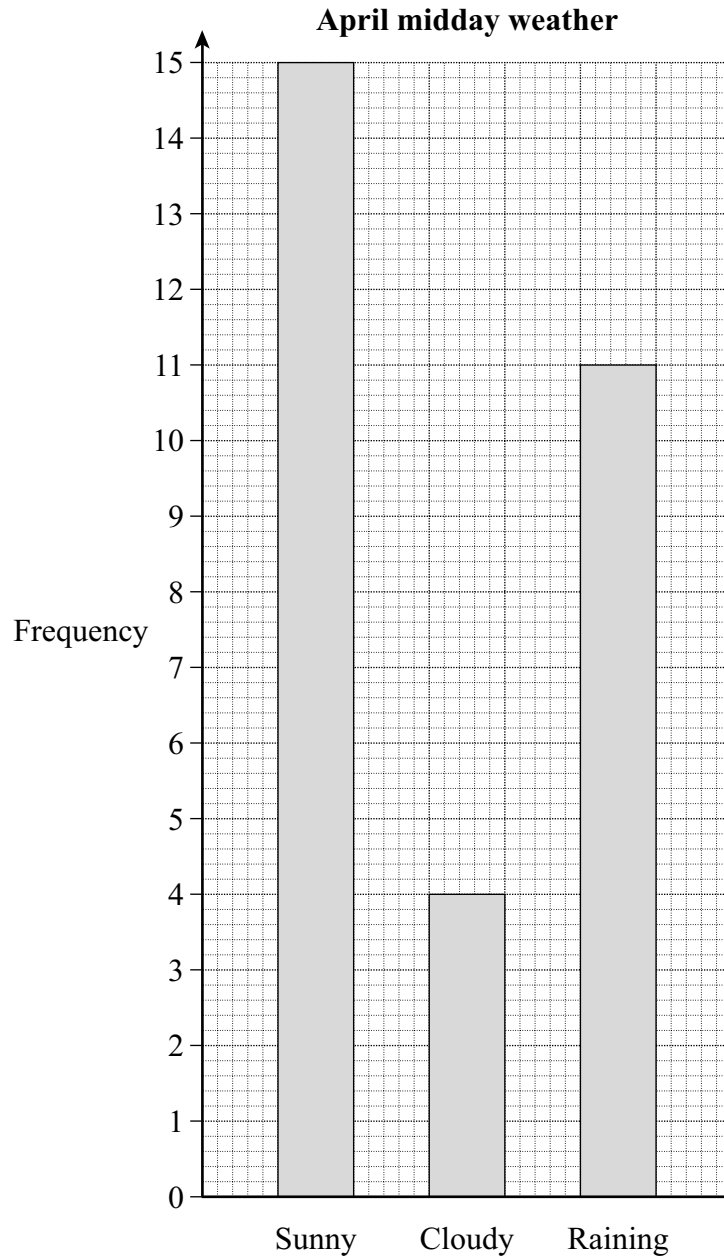


(3 marks)

(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)

2 The number of pupils in each of 10 classes is listed.

21    22    23    24    25    26    31    31    33    34

(a) Write down the mode of these numbers.

.....

Answer ..... (1 mark)

(b) Calculate the mean of these numbers.

.....

.....

.....

Answer ..... pupils (3 marks)

(c) One of these classes is chosen at random.

Write down the probability that the chosen class has more than 30 pupils in it.

.....

Answer ..... (2 marks)

- 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.



- (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**

**Turn over**

- 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)

**END OF SECTION A**

**There are no questions printed on this page**

**There are no questions printed on this page**



|                     |  |             |                  |
|---------------------|--|-------------|------------------|
| Surname             |  | Other Names |                  |
| Centre Number       |  |             | Candidate Number |
| Candidate Signature |  |             |                  |

|             |
|-------------|
| Leave blank |
|-------------|

General Certificate of Secondary Education  
November 2006



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

**33001/FB**  
**F**

Monday 13 November 2006 2.00 pm to 2.25 pm

|   |  |
|---|--|
| <p><b>For this paper you must have:</b></p> <ul style="list-style-type: none"> <li>• mathematical instruments</li> </ul> <p>You must <b>not</b> 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.
- 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.

5 The boxes show some events.

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

IMPOSSIBLE

UNLIKELY

EVEN

LIKELY

CERTAIN

The next baby born  
will be a boy

There will be eight  
Sundays next  
month

.....

.....

A person living to  
the age of 100 years

An ordinary six-sided  
dice landing on a  
number less than 7


.....






.....

(4 marks)

4

- 6 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)

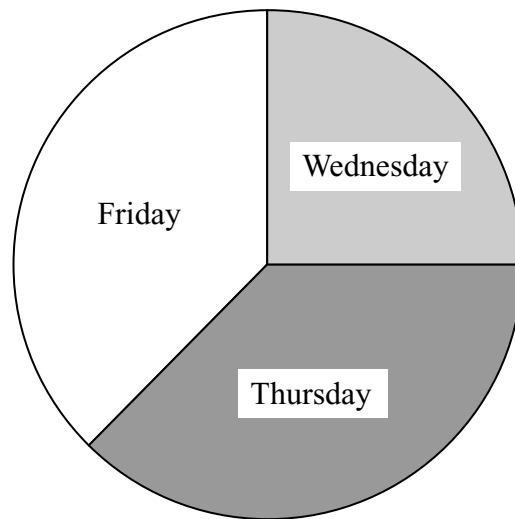
- (c) Calculate the range of the number of pieces of fruit that Jane eats over these five weeks.

.....

.....

Answer ..... (2 marks)

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



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

Answer ..... degrees (1 mark)

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

.....

Answer ..... (1 mark)

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

|              | <b>Profit (£)</b> |
|--------------|-------------------|
| Tickets      | 320               |
| Refreshments | 250               |
| Car park     | 150               |
| <b>Total</b> | <b>720</b>        |

Draw and label a pie chart to show this information.

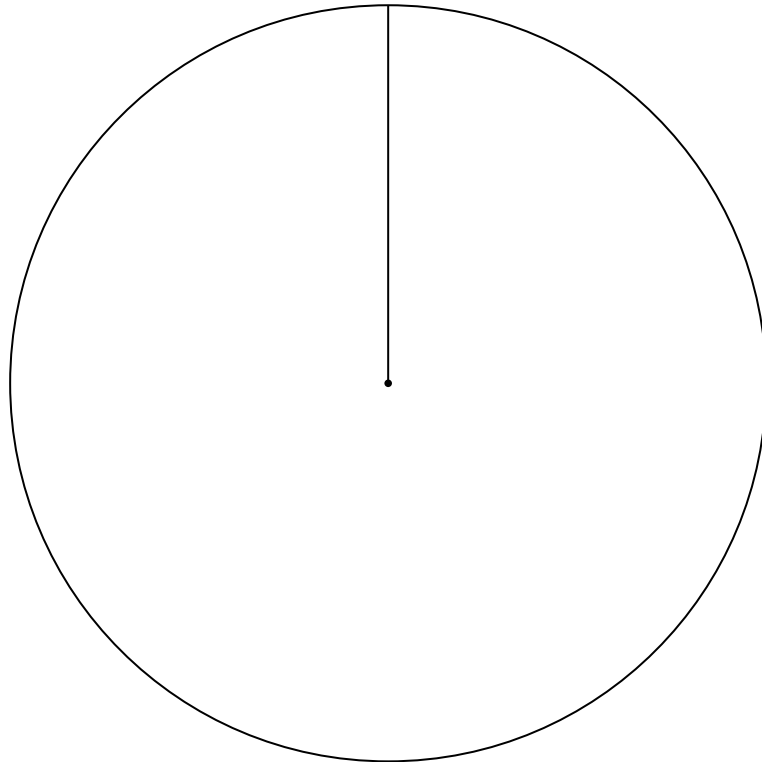
.....

.....

.....

.....

**Profit from school play**



(4 marks)

- (d) 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                     | or | fairly good?             |
|                            | <input type="checkbox"/> | <input type="checkbox"/> |    | <input type="checkbox"/> |

Tick one box.

Explain why this is not suitable.

.....

.....

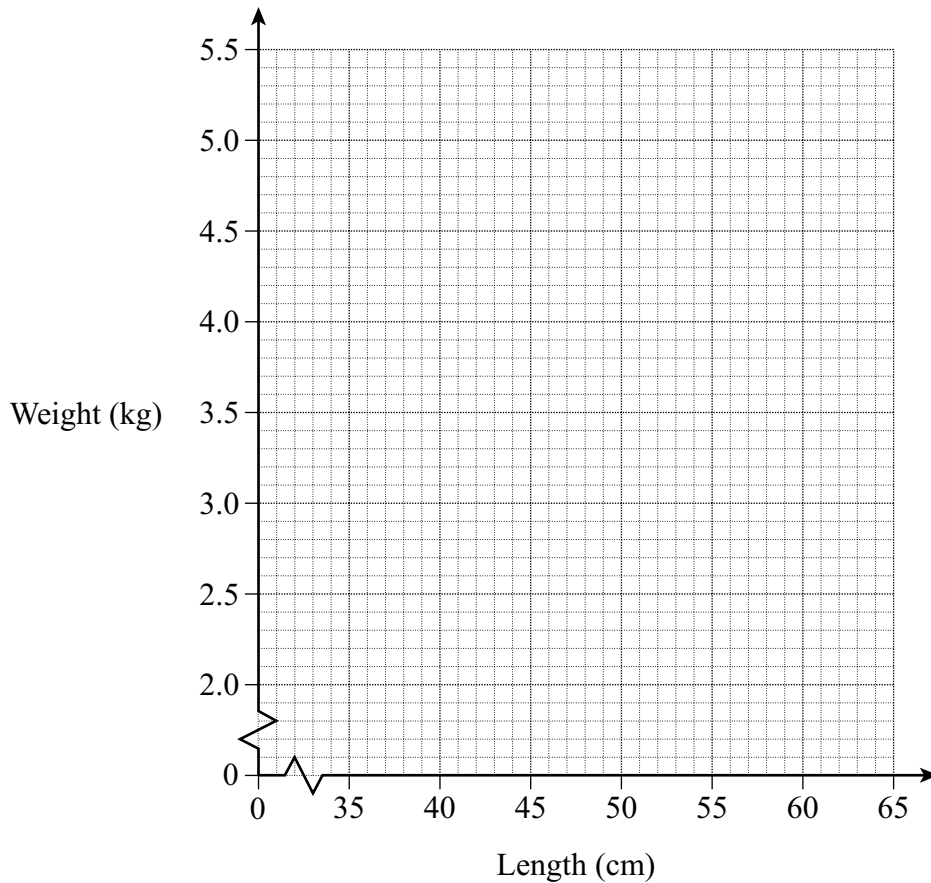
(1 mark)

Turn over

- 8 The table shows the lengths, in centimetres (cm), and the weights, in kilograms (kg), of eight newborn babies.

|                    |     |     |     |     |     |     |     |     |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Length (cm)</b> | 40  | 44  | 48  | 50  | 52  | 56  | 57  | 58  |
| <b>Weight (kg)</b> | 2.0 | 2.6 | 3.1 | 3.7 | 3.5 | 4.5 | 4.2 | 4.9 |

- (a) Draw a scatter graph to show this information.



(2 marks)

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

(1 mark)

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

.....

.....

.....

(1 mark)

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

Answer ..... kg (1 mark)

**END OF QUESTIONS**

**There are no questions printed on this page**

**There are no questions printed on this page**