

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

For Examiner's Use

General Certificate of Secondary Education
June 2007



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

43001/FA

F
TWO TIER

Monday 18 June 2007 1.30 pm to 1.55 pm

<p>For this paper you must have:</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	
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.

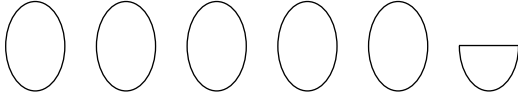
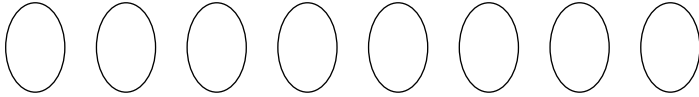
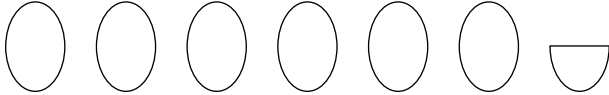
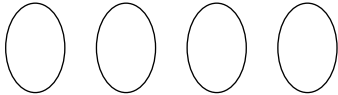
Advice

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

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

- 1 The pictogram shows the number of different birds that visited a bird table in one hour.

Key  represents 2 birds

Sparrow	
Starling	
Thrush	
Blackbird	
Robin	

- (a) How many sparrows visited the table?

.....

Answer (2 marks)

- (b) Five robins visited the table.

Fill in the pictogram to show this number.

(2 marks)

- (c) How many more thrushes than blackbirds visited the table?

.....

Answer (2 marks)

2 The number of points scored by the Tigers in the last 10 rugby matches is listed.

38 16 18 76 32 16 16 40 60 42

(a) Calculate the range of these scores.

.....

Answer points (1 mark)

(b) (i) Write down the mode of these scores.

.....

Answer points (1 mark)

(ii) In the next match the Tigers score 25 points.

What effect does this have on the mode?
Tick the correct box.

Decrease

No change

Increase

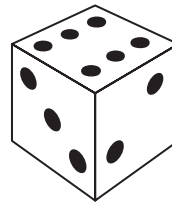
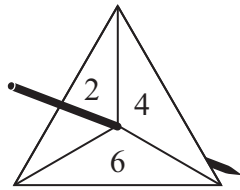
(1 mark)

3

Turn over for the next question

Turn over ►

- 3 A fair three-sided spinner has sections labelled 2, 4 and 6.
The spinner is spun once and a fair six-sided dice is thrown once.



The number that the spinner lands on is added to the number that the dice lands on.
This gives the score.

- (a) Complete the table to show all possible scores.

		Dice					
		1	2	3	4	5	6
Spinner	+						
	2	3					
	4						
6						12	

(2 marks)

- (b) Write down the probability that the score is 6.

.....

Answer (1 mark)

4 The number of pupils absent from a school each week is listed below.

125 134 121 111 105 109 118 122 119 126 133

(a) Show the data in an ordered stem-and-leaf diagram.

.....

.....

.....

.....

Key 12 | 5 represents 125 pupils

.....

.....

.....

.....

(3 marks)

(b) Write down the median number of pupils absent.

.....

Answer (1 mark)

4

Turn over ►

5 The table summarises the travelling time to work of 80 people.

Travelling time, t (minutes)	Number of people
$0 < t \leq 10$	6
$10 < t \leq 20$	17
$20 < t \leq 30$	19
$30 < t \leq 40$	23
$40 < t \leq 50$	15

Calculate an estimate of the mean travelling time.

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Answer minutes (*4 marks*)

4

END OF SECTION A

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General Certificate of Secondary Education
June 2007



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

43001/FB

F
TWO TIER

Monday 18 June 2007 2.00 pm to 2.25 pm

<p>For this paper you must have:</p> <ul style="list-style-type: none"> mathematical instruments. <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.
- 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 booklet.

Advice

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

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

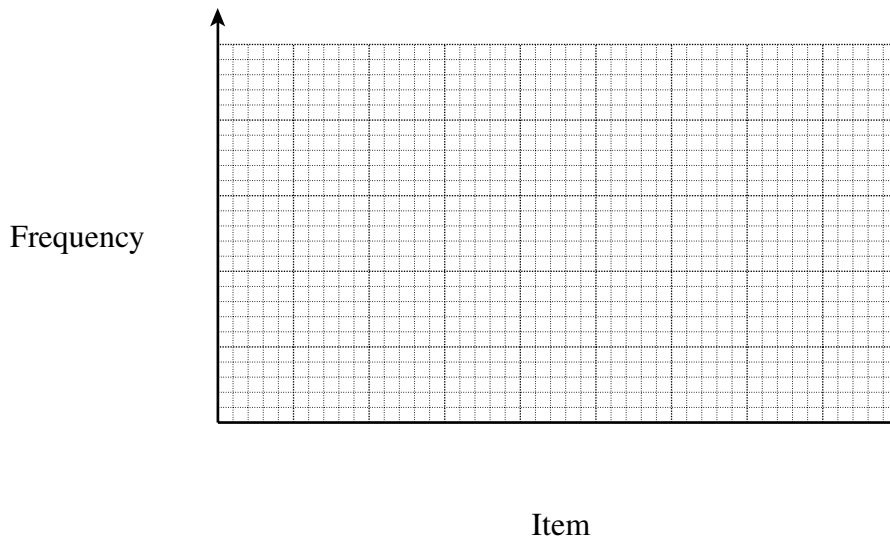
6 The items bought one day from a vending machine are recorded in the tally chart.

(a) Complete the frequency column.

Item	Tally	Frequency
Crisps (C)		
Water (W)		
Milk (M)		
Orange (O)		

(1 mark)

(b) Draw a bar chart of this data on the grid below.



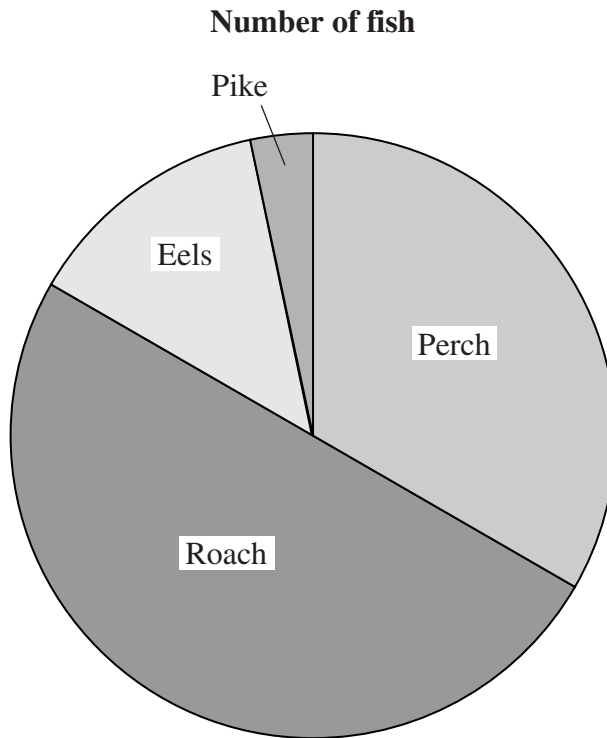
(3 marks)

(c) How many items were bought altogether?

.....

Answer (1 mark)

7 The pie chart shows the number of each type of fish that Frank caught in one day.



(a) Tick **one** box for each statement below.

	True	False	Cannot say
(i) Half the fish caught were roach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) There were more eels caught than pike.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) The pike weighed more than all of the roach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(3 marks)

(b) Frank caught 30 fish altogether.
One-third of the fish caught were perch.

How many eels and pike were caught altogether?

.....

.....

.....

Answer *(3 marks)*

Turn over ▶

8 A bag contains 6 toffees, 4 chocolates and 5 chews.
One sweet is chosen at random from the bag.

Write down the probability that the chosen sweet is

(a) a toffee

.....
.....

Answer (2 marks)

(b) a chew or a toffee.

.....
.....

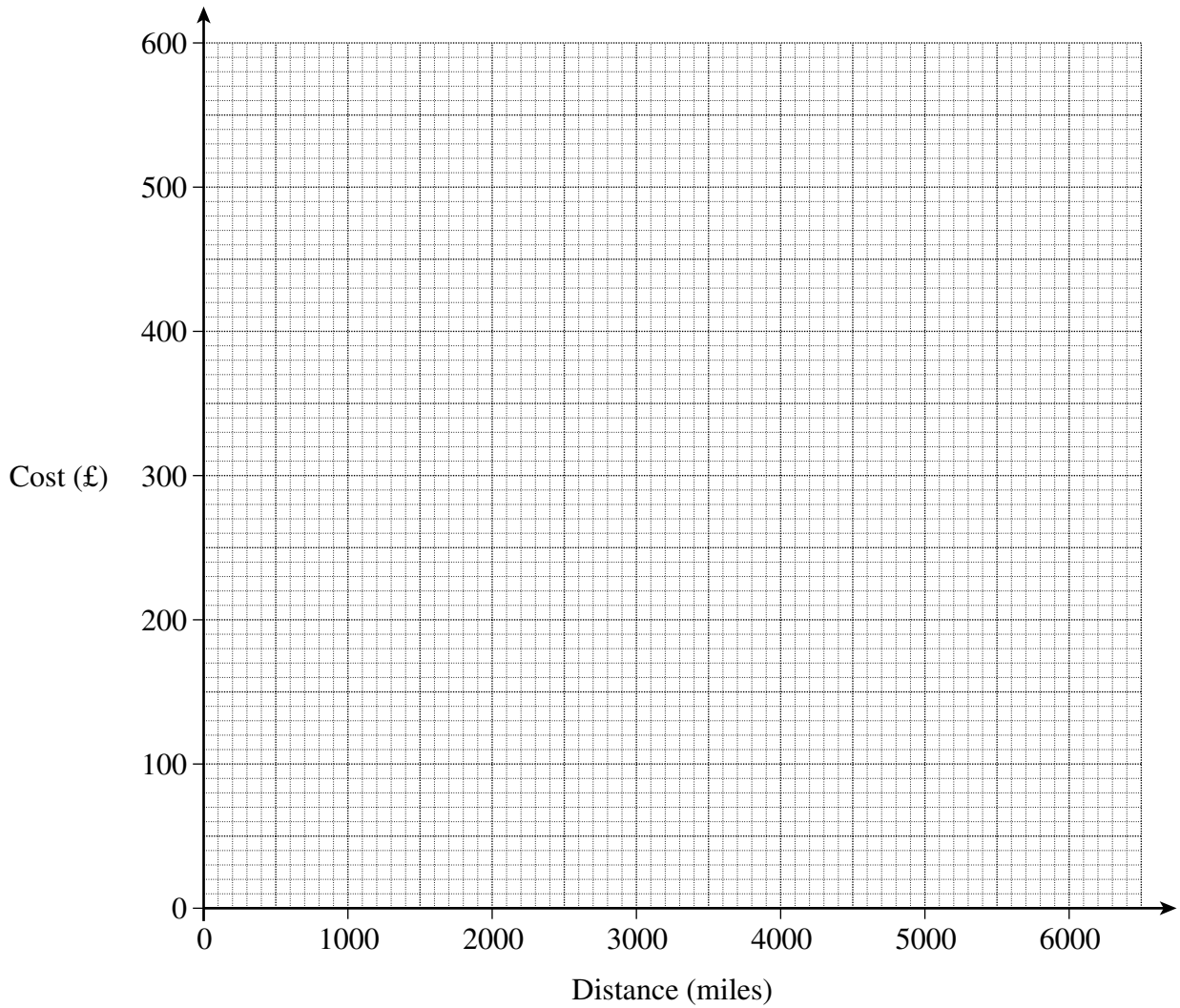
Answer (2 marks)

4

9 The distance and cost of various flights is shown in the table.

Distance (miles)	500	900	1100	2500	3500	5500	6000
Cost (£)	150	140	200	300	400	520	550

(a) Plot the data as a scatter graph.



(2 marks)

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

.....

.....

.....

(1 mark)

10 Joe carries out a survey about fast foods.
This is one of his questions.

Do you agree that eating fast foods is unhealthy?

This question is **not** suitable.

Rewrite the question so that it is suitable.
Include response boxes.

.....

.....

.....

.....

(2 marks)

2

END OF QUESTIONS

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