

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										



General Certificate of Secondary Education
Foundation Tier
June 2010

Mathematics (Modular) (Specification B)

43051/FB

Module 1 Section B

Monday 21 June 2010 2.05 pm to 2.35 pm

F

For this paper you must have:

- mathematical instruments

You must **not** use a calculator.



Time allowed for Section B

- 30 minutes

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the space provided. Do not write outside the box around each page or on blank pages.
- 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 marks for questions are shown in brackets.
- The maximum mark for Section B is 23.
- You may ask for more answer paper and graph paper. This must be tagged securely to this answer booklet.

Advice

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



J U N 1 0 4 3 0 5 1 F B 0 1

WMP/Jun10/43051/FB


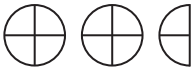



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Answer **all** questions in the spaces provided.

- 6** Tina and Kevin want to raise money for charity.
They both bake cakes to sell at school.

- 6 (a)** Tina bakes chocolate cakes.
The pictogram shows the number of cakes she sold each day in one week.

Key  represents 4 cakes

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

- 6 (a) (i)** How many cakes did Tina sell on Tuesday?

Answer (1 mark)

- 6 (a) (ii)** On which day did Tina sell 11 cakes?

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Answer (1 mark)

- 6 (a) (iii)** Tina sold exactly the same number of cakes on Friday as she sold altogether on two other days.

Which two days are these?

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Answer and (2 marks)



6 (b) Kevin bakes lemon cakes.
The table shows the number of cakes he sold each day in the same week.

Monday	10
Tuesday	17
Wednesday	14
Thursday	9
Friday	13

The chocolate cakes and lemon cakes each sell for the same amount.
Tina claims that she made more money for charity than Kevin that week.

Is she correct?
You **must** show your working.

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(3 marks)

7 Daniel collects data from the internet on the number of elephants in Africa over the last 50 years.

Write **either** a key question **or** a hypothesis he could investigate using the data he has collected.

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(1 mark)



8 Here is some data about the times, in minutes, taken by 21 pupils to complete a cross-country race.

Anna	girl	33 mins
Beth	girl	25 mins
Carl	boy	28 mins
Dee	girl	38 mins
Ethan	boy	41 mins
Flynn	boy	17 mins
Graham	boy	33 mins

Helen	girl	22 mins
Irene	girl	41 mins
Jade	girl	40 mins
Kieran	boy	20 mins
Louis	boy	34 mins
Mehdi	boy	37 mins
Neil	boy	29 mins

Oscar	boy	35 mins
Penny	girl	30 mins
Rachel	girl	49 mins
Sita	girl	37 mins
Tariq	boy	29 mins
Vikki	girl	19 mins
Will	boy	30 mins

8 (a) Dee finished 17th in the race.

Who finished 18th?

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Answer (1 mark)

8 (b) Work out the median time taken by the ten girls to complete the race.

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Answer minutes (3 marks)



8 (c) Show the times taken by the 11 boys in an ordered stem-and-leaf diagram.
Remember to complete the key.

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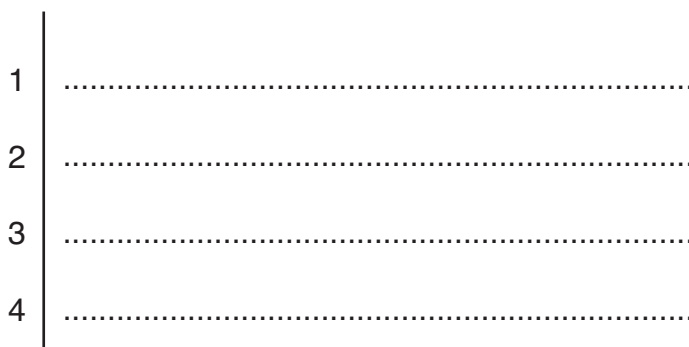
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Key | represents minutes



(4 marks)

8 (d) Use the medians to compare the times taken by the girls and the boys to complete the race.

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(2 marks)



9 (a) A fair three-sided spinner has sections labelled 1, 2 and 3. The spinner is spun twice and the numbers it lands on are multiplied together to give a score as shown in the table.

		First spin		
		1	2	3
Second spin	1	1	2	3
	2	2	4	6
	3	3	6	9

9 (a) (i) How many different scores are there?

Answer (1 mark)

9 (a) (ii) Work out the probability of obtaining a score less than 5.

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Answer (2 marks)

9 (b) Carly has a fair spinner with four equal sections numbered 1, 2, 3 and 4. Carly spins the spinner five times. Here are some possible sets of results she could get.

Set 1 2, 3, 2, 3, 2

Set 2 3, 1, 2, 4, 4

Set 3 1, 1, 1, 1, 1

Which, if any, of these sets of data is most likely? Circle your choice and explain your answer.

Set 1 Set 2 Set 3 All equally likely

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(2 marks)

END OF QUESTIONS



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