

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

For Examiner's Use

General Certificate of Secondary Education
June 2009



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

43051/FA

F

Thursday 11 June 2009 1.30 pm to 2.00 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		5	
2		6	
3		7	
4		8	
Total Section A			
Total Section B			
TOTAL			
Examiner's Initials			

Time allowed for Section A: 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 spaces provided. Answers written in margins will not be marked.
- 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 30 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 23.
- 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

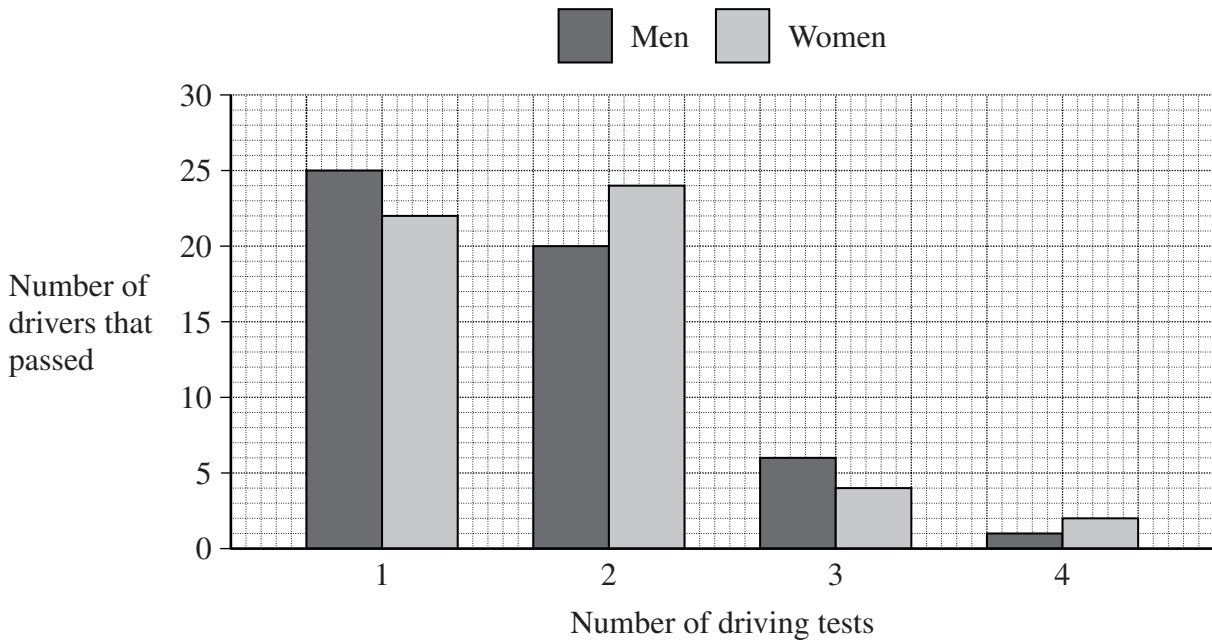
- In all calculations, show clearly how you work out your answer.



J U N 0 9 4 3 0 5 1 F A O 1

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

1 The bar chart shows the number of driving tests that learner drivers had to take before they passed.



1 (a) Write down how many men passed on their third attempt.

Answer (1 mark)

1 (b) Work out how many more men than women passed at their first attempt.

.....

Answer (2 marks)

1 (c) None of the women took more than 4 attempts to pass.

How many women in total did **not** pass at their first attempt?

.....

.....

Answer (2 marks)



1 (d) The number of lessons taken by 11 drivers is shown.

25	33	41	50	21	43
54	37	42	18	24	

1 (d) (i) Complete an ordered stem-and-leaf diagram to show this data.
Remember to complete the key.

.....

.....

.....

.....

.....

Key: | represents lessons

1	
2	
3	
4	
5	

(3 marks)

1 (d) (ii) One of these 11 drivers is chosen at random.

Write down the probability that this driver had fewer than 30 lessons.

Answer (1 mark)

9

Turn over ►



2 Donna asks ten classmates how many days they were absent from school last term.

The results are

2 0 3 7 8 0 1 11 6 4

2 (a) Calculate the mean number of days absent.

.....
.....
.....

Answer (3 marks)

2 (b) Donna says that the mean should be 3.5
She is **not** correct.

Which average has the value 3.5?
Give a reason for your answer.

Answer

Reason:
.....
.....

(2 marks)

5



- 3 The number of babies born in a Yorkshire hospital in 2004 is shown in the table. A pie chart is to be drawn.

Babies	Number	Angle
Small	720	
Medium	1200	
Large	960	120°
Total	2880	360°

(2 marks)

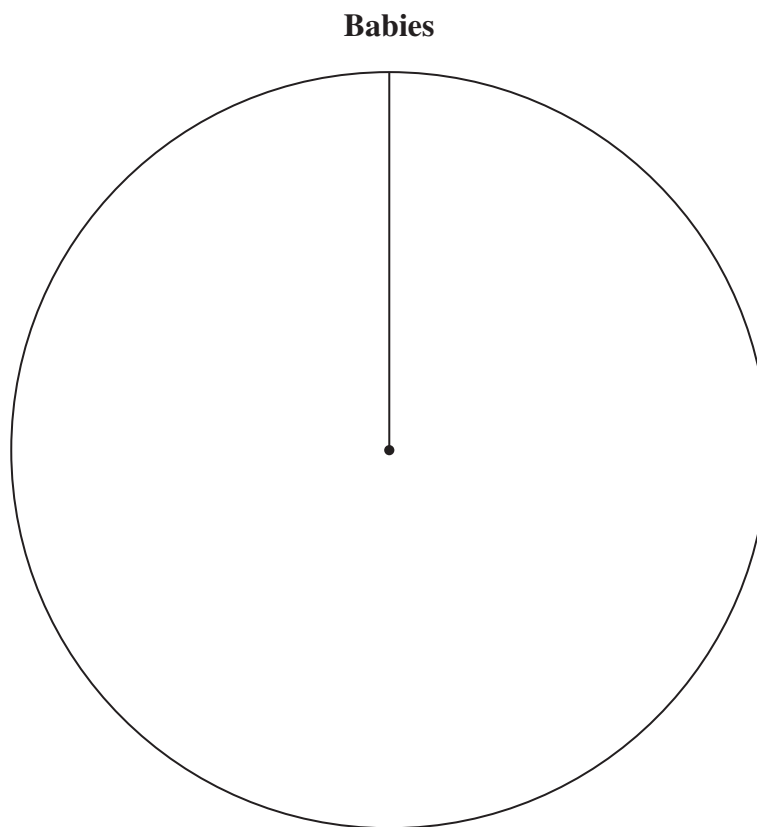
- 3 (a) Complete the table.

.....

.....

.....

- 3 (b) Draw and label the pie chart.



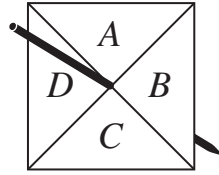
(2 marks)

4

Turn over ►



4 A four-sided spinner is shown.



The spinner is biased.

Some of the probabilities of the spinner landing on a letter are shown in the table.

Letter	Probability
<i>A</i>	0.3
<i>B</i>	
<i>C</i>	
<i>D</i>	0.1

The probability that the spinner lands on *C* is double the probability that the spinner lands on *D*.

The spinner is spun 60 times.

Calculate the number of times you would expect it to land on *B*.

.....

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Answer (5 marks)

END OF SECTION A



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General Certificate of Secondary Education
June 2009



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

43051/FB

F

Thursday 11 June 2009 2.05 pm to 2.35 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: 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 spaces provided. Answers written in margins will not be marked.
- 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 23.
- 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.




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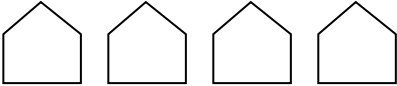
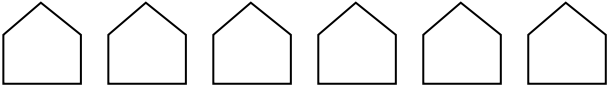
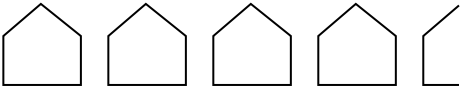
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Answer **all** questions in the spaces provided.

5 The chart shows the number of village shops that closed in some areas of the UK in 2008.

Key:  represents village shops

Area	Number of village shops closed	Pictogram
Scotland	40	
North West		
South		
Wales	25	

5 (a) Complete the key. (1 mark)

5 (b) Complete the chart. (4 marks)

5 (c) On average each of the village shops employed two people.

Estimate the number of people in total who lost their job when these village shops closed.

.....

.....

.....

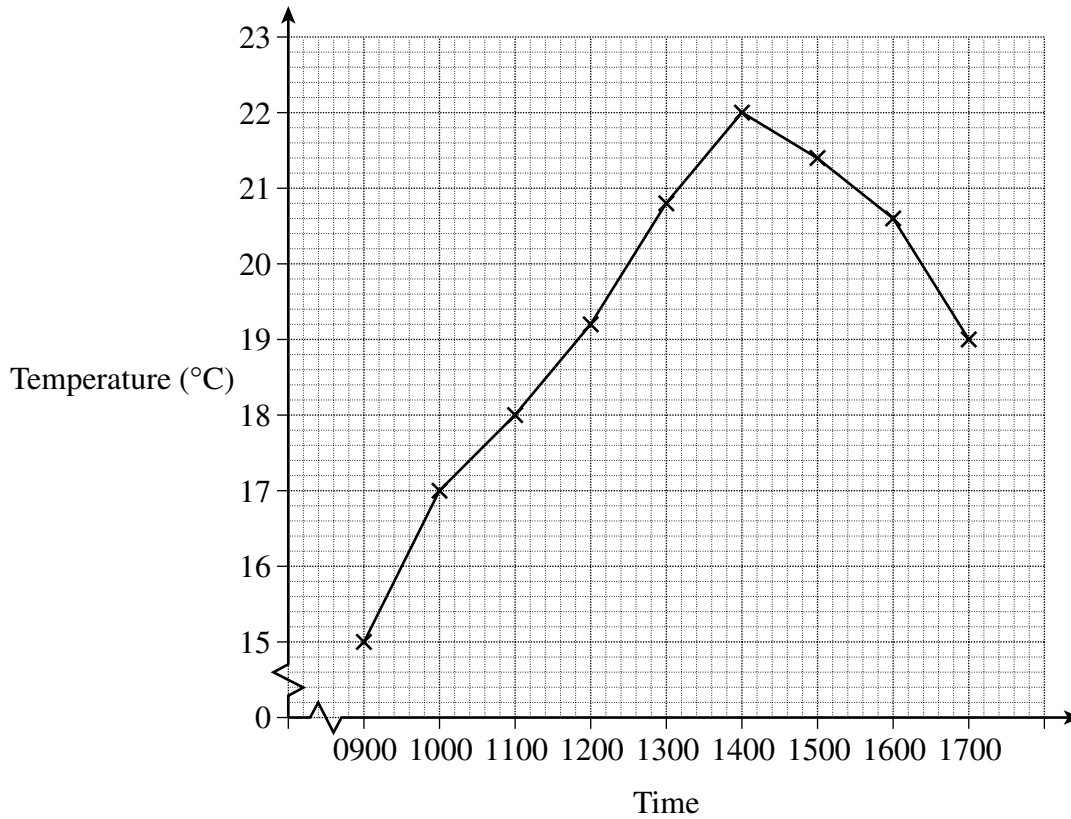
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Answer (3 marks)

Turn over ►



6 The graph shows the temperature from 0900 to 1700 on one day.



6 (a) Use the graph to estimate how long the temperature was above 19 °C. Give your answer to the nearest hour.

.....

Answer hours (1 mark)

6 (b) How much did the temperature rise between 0900 and 1300?

.....

.....

Answer °C (2 marks)



6 (c) The highest temperature for the whole day is shown on the graph.

What was the highest temperature?

Answer °C (1 mark)

6 (d) The range of the temperatures for the whole day was 18 °C.

Work out the lowest temperature on this day.

.....

.....

Answer °C (2 marks)

6

Turn over for the next question

Turn over ►



7 The pocket money of 14 children last week is shown.

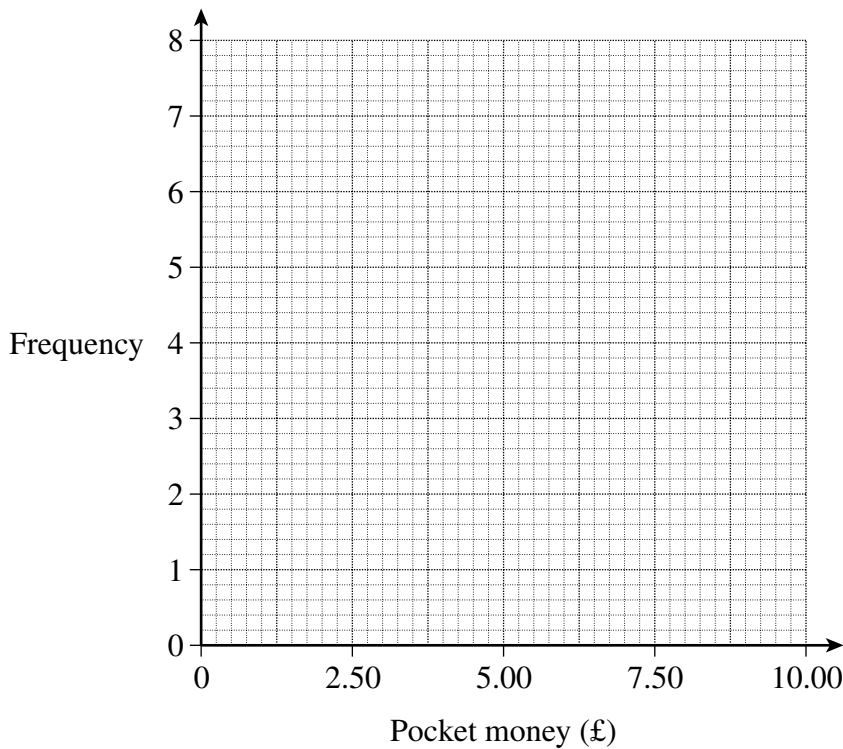
£5 £3 £6 £7.20 £2 £1 £9
 £4 £6 £2 £1 £1.80 £5 £2

7 (a) Complete the tally and frequency column in the table below.

Pocket money	Tally	Frequency
£0 to less than £2.50		
£2.50 to less than £5.00		
£5.00 to less than £7.50		
£7.50 to less than £10.00		

(2 marks)

7 (b) Draw a frequency diagram on the grid below.



(2 marks)

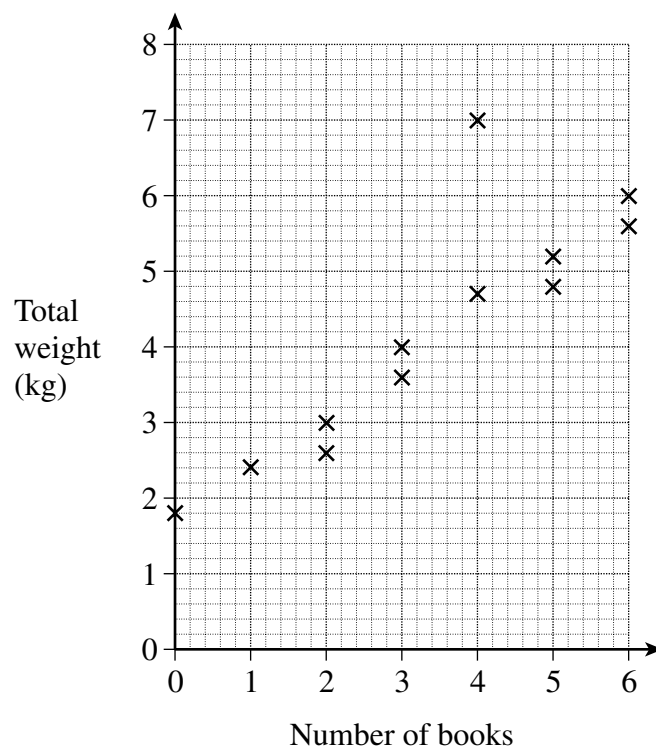
7 (c) Write down the modal class.

Answer £ to less than £
 (1 mark)

5



- 8 12 students carried out an investigation.
They counted the number of books in their bags.
Each student weighed their bag with the books and recorded the total weight.
The results are shown on the scatter diagram.



- 8 (a) Describe the relationship between the number of books and the total weight.

.....

 (1 mark)

- 8 (b) (i) Draw a circle around the point that does not fit the general pattern. (1 mark)

- 8 (b) (ii) If this point is removed from the scatter diagram what effect would this have on the correlation?

Tick the correct box.

Weaker

No effect

Stronger

Explain your answer.

.....

(2 marks)

END OF QUESTIONS



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