

Surname						Other Names					
Centre Number						Candidate Number					
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General Certificate of Secondary Education
March 2006



**MATHEMATICS (MODULAR) (SPECIFICATION B)
Module 3 Foundation Tier Section A**

33003/FA

F

Monday 6 March 2006 9.00 am to 9.40 am

<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	
Pages	Mark	Pages	Mark
2 – 3		2 – 3	
4 – 5		4 – 5	
6 – 7		6 – 7	
Total Section A			
Total Section B			
TOTAL			
Examiner's Initials			

Time allowed for Section A: 40 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.
- This paper is divided into two sections: Section A and Section B.
- After the 40 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 32.
- The marks for questions are shown in brackets.
- You may ask for more answer paper. This must be tagged securely to this answer book.
- You are expected to use a calculator where appropriate.

Advice

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

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

- 1 Mrs Moore parked her car in a car park at 9.00 am.
She drove out of the car park at 4.00 pm.

Car Parking Charges

£1.80 per hour

- (a) For how many hours was her car in the car park?

.....

Answer hours (1 mark)

- (b) How much did she pay, in total, for parking her car?

.....

.....

Answer £ (2 marks)

- 2 (a) Write the number twenty thousand in figures.

Answer (1 mark)

- (b) Write the number 5624

- (i) to the nearest 100

Answer (1 mark)

- (ii) to the nearest 1000.

Answer (1 mark)

3 Here is a list of numbers.

40 50 60 70 80 90 100

(a) Which number in the list is a square number?

Answer (1 mark)

(b) Work out the total of all the numbers in the list.

.....

Answer (1 mark)

4 (a) How many shirts costing £6.35 each can be bought for £50?

.....

.....

Answer (2 marks)

(b) In France a supermarket bill is €77.

The exchange rate is €1.4 = £1

Work out the cost of the bill in pounds.

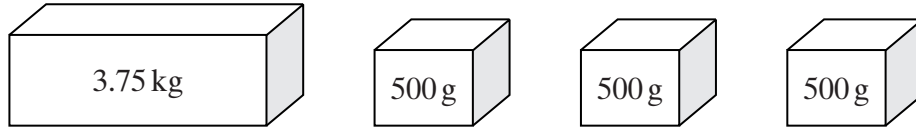
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Answer £ (2 marks)

Turn over ►

- 5 A postman has four parcels to deliver.
One parcel weighs 3.75 kilograms.
Three parcels weigh 500 grams each.



Calculate the total weight of the parcels.
Give your answer in kilograms.

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Answer kg (3 marks)

- 6 There are 1750 pupils at a school.
 $\frac{2}{7}$ of the pupils travel to school by car.

How many pupils travel by car?

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Answer (2 marks)

7 (a) Write 60% as a decimal.

.....

Answer (1 mark)

(b) Work out 38% of £146.

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Answer £ (2 marks)

(c) What percentage is £108 of £150?

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.....

Answer % (2 marks)

Turn over for the next question

Turn over ▶

8 Season ticket prices for a football club are shown in the table.

	Adult	Child
Main Stand	£480	£170
Family Enclosure	£420	£140

(a) Mrs Hamdani buys tickets for 2 adults and 3 children for the Family Enclosure.

How much does she pay in total for these tickets?

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Answer £ (3 marks)

(b) Mr Matthews buys tickets for the Main Stand.
He buys tickets for himself and all of his children.
He pays a total of £1330.

How many children's tickets does he buy?

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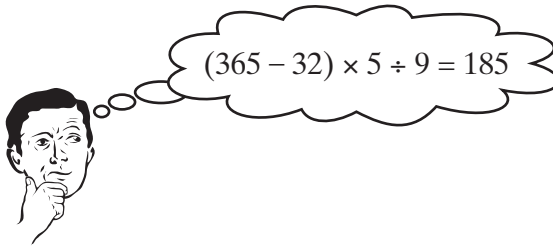
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Answer (3 marks)

- 9 Dave uses this method to convert degrees Fahrenheit ($^{\circ}\text{F}$) to degrees Celsius ($^{\circ}\text{C}$).

- Step 1: Subtract 32
Step 2: Multiply by 5
Step 3: Divide by 9

For example, 365°F converts to 185°C .



Use this method to convert 77°F to $^{\circ}\text{C}$.

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Answer $^{\circ}\text{C}$ (2 marks)

- 10 Use your calculator to work out $\frac{9.8 - 0.95}{4.2 \times 1.6}$

- (a) Write down the full calculator display.

.....

.....

Answer (1 mark)

- (b) Write your answer to 1 decimal place.

Answer (1 mark)

END OF SECTION A

There are no questions printed on this page

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General Certificate of Secondary Education
March 2006



**MATHEMATICS (MODULAR) (SPECIFICATION B)
Module 3 Foundation Tier Section B**

33003/FB

F

Monday 6 March 2006 9.45 am to 10.25 am

<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: 40 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 32.
- The marks for questions are shown in brackets.
- You may ask for more answer paper. This 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.

11 From this list of numbers

42 77 34 23 68 84

(a) find two numbers that add up to 100

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Answer and (1 mark)

(b) find two numbers that have a difference of 50

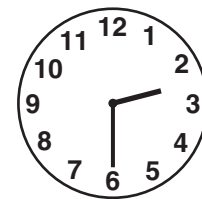
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Answer and (1 mark)

(c) find the smallest even number.

Answer (1 mark)

12 Amina arrived home one afternoon and the clock showed the time as half past two.



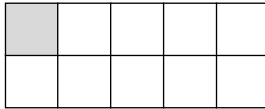
Her father told her that the clock was seven minutes fast.

What was the correct time when Amina arrived home?
Give your answer using the 24-hour clock notation.

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.....
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Answer (3 marks)

- 13 (a) Here is a rectangle.
Part of it is shaded.



- (i) What fraction of the rectangle is shaded?

Answer (1 mark)

- (ii) What percentage of the rectangle is shaded?

Answer % (1 mark)

- (b) Write 0.13 as a fraction.

.....
.....

Answer (1 mark)

- 14 (a) Half a dozen eggs cost 64p.

Find the cost of a dozen eggs.

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.....

Answer £ (1 mark)

- (b) Tom buys five drinks at 85p each.
He pays with a £5 note.

How much change should he receive?

State the units of your answer.

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Answer (3 marks)

Turn over ►

- 15** The temperature at midnight was recorded at a weather station in Scotland during a week in February.
Five of these temperatures are shown in the table.

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Temperature (°C)	2	-4		-1	-4	-8	

- (a) Which of these five temperatures was the warmest?

Answer °C (1 mark)

- (b) On Wednesday the temperature at midnight was 3 degrees lower than that recorded on Tuesday.

What was the temperature at midnight on Wednesday?

.....

Answer °C (1 mark)

- (c) On Sunday the temperature at midnight was 5 degrees higher than that recorded on Saturday.

What was the temperature at midnight on Sunday?

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Answer °C (1 mark)

16 Calculate

(a) $456 + 346 + 75$

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Answer (2 marks)

(b) $7.4 - 2.56$

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Answer (1 mark)

(c) 6^3

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Answer (2 marks)

(d) $\frac{3}{4} - \frac{1}{5}$

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Answer (2 marks)

Turn over 

17 Estimate the value of $\frac{9.8 \times 20.1}{8.2 - 2.9}$

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Answer (2 marks)

18 Anthony wants to travel from Liverpool to London by train.

He obtains the following timetable from the internet.

Liverpool Lime Street	09:24	10:24	11:24
Crewe	10:15	11:15	12:15
Nuneaton	10:59		12:59
London Euston	12:26	13:19	14:26

Assume that all the trains will keep to their correct times.

(a) Anthony needs to arrive at London Euston by 14:00

(i) Which is the latest train that he can take from Liverpool Lime Street?

Answer (1 mark)

(ii) How long will this train take to travel from Liverpool Lime Street to Crewe?

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Answer minutes (2 marks)

(b) Anthony notices that one of the boxes in the timetable is empty.

Explain why this box is empty.

.....

.....

(1 mark)

19 Shalina has two cats and has asked a neighbour to feed them while she is away on holiday.

Each cat will eat $\frac{3}{4}$ of a tin of food every day.

Shalina is going to be away for seven days.

What is the least number of tins of food needed to feed **both** cats?

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Answer (3 marks)

END OF QUESTIONS

There are no questions printed on this page