

Surname						Other Names					
Centre Number						Candidate Number					
Candidate Signature											

For Examiner's Use
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General Certificate of Secondary Education  
June 2009



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

43053/FA

**F**

Tuesday 23 June 2009 9.00 am to 9.45 am

<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>	
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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	
8			
Total Section A			
Total Section B			
TOTAL			
Examiner's Initials			

Time allowed for Section A: 45 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 or on blank pages 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 45 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 35.
- 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.



JUN0943053FA01

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

1 (a) Write ten thousand in figures.

Answer ..... (1 mark)

1 (b) Write 1010 in words.

Answer ..... (1 mark)

1 (c) Round 2634 to the nearest thousand.

Answer ..... (1 mark)

1 (d) What is the value of the digit 8 in 9875?

Answer ..... (1 mark)

1 (e) Work out  $7249 + 2163 - 5075$

Answer ..... (1 mark)

2 A school hires five coaches for a school trip.  
Each coach can carry 46 passengers.  
Four of the coaches are full and one is exactly half full.

How many passengers are on the trip?

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

Answer ..... (3 marks)



3 (a) Write down a multiple of 7 between 40 and 50.

Answer ..... (1 mark)

3 (b) Two numbers multiply to make 80.  
The same two numbers add to make 21.

What are the two numbers?

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.....  
.....

Answer ..... and ..... (2 marks)

**Turn over for the next question**



4 Write one of the following +, −, × or ÷ in each box to make correct statements.

An example has been done for you.

$$10 \boxed{+} 5 = 20 \boxed{-} 5$$

4 (a)  $12 \boxed{\phantom{+}} 6 = 3 \boxed{\phantom{+}} 6$

.....  
(1 mark)

4 (b)  $15 \boxed{\phantom{+}} 5 = 6 \boxed{\phantom{+}} 2$

.....  
(1 mark)

4 (c)  $10 \boxed{\phantom{+}} 2 \boxed{\phantom{+}} 3 = 9 \boxed{\phantom{+}} 5$

.....  
.....  
.....  
(1 mark)



5 The table shows the temperature at 2:00 am in five cities.

City	Glasgow	Moscow	Paris	New York	Madrid
Temperature, °C	-2	-11	1	-6	8

5 (a) Which city was the coldest?

Answer ..... (1 mark)

5 (b) How much warmer was Paris than New York?

.....

Answer ..... °C (1 mark)

5 (c) Between 2:00 am and 4:00 am the temperature in Moscow fell by 2 °C.

What was the temperature in Moscow at 4:00 am?

.....

Answer ..... °C (1 mark)

**Turn over for the next question**



6 A school has 1200 pupils.

6 (a) 15% of the pupils are in Year 11.

How many pupils are in Year 11?

.....  
.....

Answer ..... (2 marks)

6 (b) 960 pupils walk to school.

What fraction of the 1200 pupils do **not** walk to school?

Give your answer in its simplest form.

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

Answer ..... (3 marks)

7 Molly buys a games console and four games.

She pays a total of £431.95

The console costs £279.99

Each game costs the same amount.

Work out the cost of one game.

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

Answer £ ..... (3 marks)



8 The normal price of a 500 gram packet of rice is 90p.  
There are two special offers.

**Offer A**  
50% off the normal price

**Offer B**  
50% extra rice free  
Price still only 90p

Which offer is better value for money?  
You **must** show your working.

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Answer ..... (5 marks)

9 Write 40 as the product of prime factors.

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

Answer ..... (2 marks)

**Turn over for the next question**

15

**Turn over** ►



**10** £3000 is shared in the ratio 8 : 5 : 2

Work out the largest share.

.....

.....

.....

Answer £ ..... (3 marks)

**END OF SECTION A**





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General Certificate of Secondary Education  
June 2009



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

43053/FB

**F**

Tuesday 23 June 2009 9.50 am to 10.35 am

<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>	
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Time allowed for Section B: 45 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 or on blank pages 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 35.
- 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** Complete the table.

Decimal	Fraction	Percentage
0.3	$\frac{3}{10}$	30%
	$\frac{1}{4}$	25%
0.7		70%
0.02	$\frac{1}{50}$	

.....

.....

.....

(3 marks)

**12** The cost of drinks from a machine is shown.

Tea	70p
Coffee	90p
Soup	£1.10
Hot Chocolate	£1.40
Juice	75p

**12** (a) Which drink costs 40p less than the cost of soup?

.....

Answer ..... (1 mark)



12 (b) What is the total cost of two soups and one hot chocolate?

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

Answer £ ..... (2 marks)

12 (c) Bev uses exactly three coins to buy one juice.

List the coins that she uses.

.....

Answer ....., ....., ..... (1 mark)

12 (d) Which **three** drinks can be bought for exactly £3?

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

Answer .....  
.....  
..... (2 marks)

**Turn over for the next question**



13 (a) Work out 25% of 48.

.....  
.....

Answer ..... (2 marks)

13 (b) (i) Explain why one-fifth of 35 is 7.

.....  
.....

(1 mark)

13 (b) (ii) Work out  $\frac{3}{5}$  of 35.

.....

Answer ..... (1 mark)

14 Fill in each box to make a correct statement.

14 (a)  $3.6 + \boxed{\phantom{000}} = 3.61$

(1 mark)

14 (b)  $54.7 \div \boxed{\phantom{000}} = 0.547$

(1 mark)

14 (c)  $8 - \boxed{\phantom{000}} = 7.8$

(1 mark)

14 (d) The number that is half way between 4.7 and 4.8 is  $\boxed{\phantom{000}}$

(1 mark)



- 15 Kim uses this method to multiply a number by 999.

Multiply the number by 1000.  
Subtract the number from this answer.

For example

$$\begin{aligned} 3 \times 999 &= 3 \times 1000 - 3 \\ &= 3000 - 3 \\ &= 2997 \end{aligned}$$

Use Kim's method to work out  $28 \times 999$ .

You **must** show your working.

.....

.....

.....

Answer ..... (2 marks)

- 16 Carys says, "When you add a positive number to a negative number you always get a negative answer."

Give an example to show that Carys is **not** correct.

.....

.....

.....

(2 marks)



- 17 (a) The timetable for a flight from London to Lisbon is shown.

Departure from London	16 August	21:50
Arrival in Lisbon	17 August	00:35

How long should the journey take?  
Give your answer in hours and minutes.

Show your working.

.....

.....

.....

Answer ..... hours ..... minutes (2 marks)

- 17 (b) A different flight takes 3 hours to travel a distance of 960 miles.

Work out the average speed.

.....

.....

Answer ..... miles per hour (2 marks)

- 18 Ahmed uses  $\frac{2}{3}$  of a litre of milk each day.  
He buys milk in 2 litre bottles.

What is the least number of bottles that he needs to buy for one week?  
You **must** show your working.

.....

.....

.....

.....

Answer ..... (3 marks)



19 (a) Explain why  $\sqrt{90}$  has a value between 9 and 10.

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

(2 marks)

19 (b) Estimate the value of  $\frac{297 \times 3.98}{0.102}$

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

Answer ..... (3 marks)

20 Given that  $2\frac{1}{2} \times 1\frac{3}{10} = 3\frac{1}{4}$

20 (a) write down the value of  $7\frac{1}{2} \times 1\frac{3}{10}$

Answer ..... (1 mark)

20 (b) write down the value of  $2\frac{1}{2} \times 1\frac{3}{10} \div 3\frac{1}{4}$

Answer ..... (1 mark)

**END OF QUESTIONS**



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

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