General Certificate of Secondary Education
June 2008

MATHEMATICS (MODULAR) (SPECIFICATION B)   **43053/FA**
Module 3   Foundation Tier   Section A
Non-coursework Specification

F

AQA
ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Tuesday 24 June 2008   9.00 am to 9.45 am

For this paper you must have:
- a calculator
- mathematical instruments
- a treasury tag.

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.

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

1 The diagram shows three equal rectangles.

1 (a) (i) What fraction of the diagram is shaded?

Answer .... *(1 mark)*

1 (a) (ii) Sam says that more than half of the shape is **not** shaded.

Is he correct?
Circle the answer.

Yes   No   *(1 mark)*

1 (b) Which fraction is larger, $\frac{1}{2}$ or $\frac{1}{3}$?

Circle the answer.

$\frac{1}{2}$ $\frac{1}{3}$

(1 mark)

2 Look at this list of numbers.

      3085   20 176   5476   909   13 860

2 (a) Which is the largest number in the list?

        Answer .... *(1 mark)*

2 (b) Write your answer to part (a) in words.

        ....

        ....
        (1 mark)

2 (c) Multiply together the two odd numbers from the list.

        ....

        Answer .... *(2 marks)*

2 (d) Which **two** of the numbers in the list are multiples of 5?

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

2 (e) Which of the numbers in the list is equal to 74 squared?

        Answer .... *(1 mark)*

3 (a) Write down the number that is 8 less than 3.

        ....

        Answer .... *(1 mark)*

3 (b) Write down the number that is 7 more than –11.

        ....

        Answer .... *(1 mark)*

12

Turn over ▶

4 Complete the table.

Fraction	Decimal	Percentage
$\frac{9}{100}$	0.09	
	0.15	15%
$\frac{4}{5}$		80%

(3 marks)

5 Linda had £100 with her when she went shopping.
She bought

5 DVDs	at	£8.99 each
2 dresses	at	£21.45 each
1 bag	at	£9.99

How much money did she have left after she bought these goods?

....

....

....

Answer £ .... *(4 marks)*

6 Calculate 47% of 58.

....

....

....

Answer .... *(2 marks)*

7 Matt is going on holiday to Jordan.
The currency of Jordan is the dinar.
£1 = 1.25 dinar

7 (a) Matt changes £500 into dinar.

How many dinar does Matt receive?

....

....

Answer .... dinar *(2 marks)*

7 (b) After the holiday Matt has 47.50 dinar left.

Convert 47.50 dinar into pounds.

....

....

Answer £ .... *(2 marks)*

13

0 5

8 Calculate $\dfrac{5.6 \times 7.8}{4.3 - 2.1}$

....

....

8 (a) Write down your full calculator display.

Answer .... *(1 mark)*

8 (b) Write your answer to part (a) to one decimal place.

Answer .... *(1 mark)*

8 (c) Write your answer to part (a) to the nearest hundredth.

Answer .... *(1 mark)*

8 (d) Insert brackets in

$$5.6 \quad \times \quad 7.8 \quad \div \quad 4.3 \quad - \quad 2.1$$

so that it is equal to $\dfrac{5.6 \times 7.8}{4.3 - 2.1}$

(1 mark)

9 There are 126 people at a party.
The ratio of adults to children at the party is 1 : 6

9 (a) How many adults and children are there?

....

....

....

Answer   Adults ....

Children .... *(3 marks)*

9 (b) Nine more adults arrive.

Including these adults, what is the new ratio of adults to children?
Give your answer in the form 1 : k, where k is to be found.

....

....

....

Answer .... *(3 marks)*

END OF SECTION A

10

There are no questions printed on this page

DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED

General Certificate of Secondary Education
June 2008

MATHEMATICS (MODULAR) (SPECIFICATION B)   **43053/FB**
Module 3   Foundation Tier Section B
Non-coursework Specification

F

AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Tuesday 24 June 2008   9.50 am to 10.35 am

For this paper you must have:
- mathematical instruments.

You must **not** use a calculator.

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.

10 Work out

10 (a) 639 + 874

....

....

....

Answer .... *(2 marks)*

10 (b) 1100 − 582

....

....

....

Answer .... *(2 marks)*

10 (c) 108 ÷ 4

....

....

....

Answer .... *(1 mark)*

10 (d) $\frac{3}{8}$ of 48

....

....

....

Answer .... *(2 marks)*

11 (a) Jade says that ten million in figures is 1 000 000.

Explain why Jade is wrong.

....

....
(1 mark)

11 (b) Hassan says 500 010 is five thousand and ten.

Is Hassan correct?
You **must** explain your answer.

....

....
(1 mark)

12 Insert operations to make the calculations correct.
Choose from +, − and ×.

Example   3   4   5   =   7

Answer   3   ×   4   −   5   =   7

12 (a)   3   4   5   =   2   *(1 mark)*

12 (b)   3   4   5   =   17   *(1 mark)*

13 Estimate the value of 198×3.1

....

....

Answer .... *(2 marks)*

13

Turn over ▶

0 3

14 In each list, put the numbers in order starting with the smallest.

14 (a) 0.65   0.8   0.334

....

Answer .... *(1 mark)*

14 (b) –8   6   –5   2.5

....

Answer .... *(2 marks)*

15 1475 people queue for a fairground ride.
The ride takes 35 people each time.

How many times does the ride go so that everyone gets a ride?

....

....

....

....

Answer .... *(4 marks)*

16 You are given that 1 billion = 1000 million
In the 2005 / 2006 football season the total income from broadcasting for the Premier League clubs was £501 837 248.

Is the total income more than half a billion pounds?
You **must** explain your answer.

....

....

....

(2 marks)

17 Work out

17 (a) the cube of 3

....

Answer .... *(1 mark)*

17 (b) 0.1×0.2

....

Answer .... *(1 mark)*

18 You are given that $\dfrac{34\,888}{98} = 356$

Write down the value of

18 (a) 356×980

Answer .... *(1 mark)*

18 (b) $\dfrac{34\,888}{9.8}$

Answer .... *(1 mark)*

Turn over for the next question

13

Turn over ▶

*Areas outside
the box will
not be scanned
for marking*

19 (a) Work out $\frac{3}{5} - \frac{2}{7}$

....

....

....

Answer .... *(2 marks)*

19 (b) Use your answer to part (a) to write down the answer to $1\frac{3}{5} - \frac{2}{7}$

....

Answer .... *(1 mark)*

20 Tom says that there are no numbers less than 100 which are both a square number and a cube number.

Find **two** examples to show that Tom is wrong.

....

....

....

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

21 (a) Write 36 as the product of prime factors.
Give your answer in index form.

....

....

....

Answer .... *(3 marks)*

21 (b) What is the Least Common Multiple (LCM) of 12 and 36?

....

Answer .... *(1 mark)*

END OF QUESTIONS

There are no questions printed on this page

DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED