

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Section A	Mark
Pages	
2–3	
4–5	
6–7	
8	
Total Section A	
Section B	Mark
Pages	
2–3	
4–5	
6	
Total Section B	
TOTAL	



General Certificate of Secondary Education
Foundation Tier
June 2010

Mathematics (Modular) (Specification B)

43053/FA

Module 3 Section A

Monday 21 June 2010 9.00 am to 9.45 am

F

<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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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. Do not write outside the box around each page or on blank pages.
- 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 marks for questions are shown in brackets.
- The maximum mark for Section A is 35.
- You may ask for more answer 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 3 F A 0 1

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

- 1** Kayleigh is saving coins in a bottle.
The table shows the number of each coin in the bottle.

Coin	Number of coins
1p	79
2p	213
5p	64
10p	176
20p	89

- 1 (a)** What is the total value of the 20p coins?
Give your answer in pounds.

.....
.....

Answer £ (2 marks)

- 1 (b)** Show that the total value of all the coins is £43.65

.....
.....

(2 marks)



2 (a) Here are some numbers.

34.8 0.076 5 0.3

Write these numbers in order.
Start with the smallest.

.....

Answer
(2 marks)

2 (b) Jane is working out the answer to 249×354
She says the answer ends in a 6.

2 (b) (i) Without working out the answer, explain why she is correct.

.....

.....
(1 mark)

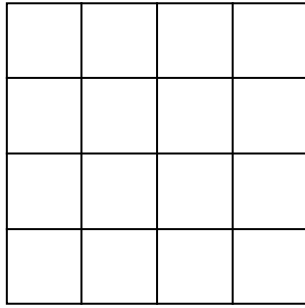
2 (b) (ii) Use your calculator to work out 249×354

Answer
(1 mark)

Turn over for the next question

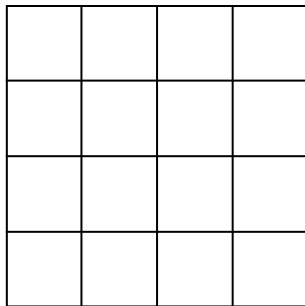


3 (a) Shade 25% of this grid.



(1 mark)

3 (b) Shade $\frac{3}{8}$ of this grid.



(1 mark)

3 (c) Which is larger, 25% or $\frac{3}{8}$?

Give a reason for your answer.

Answer

Reason

.....
(1 mark)



4 A laptop is normally priced at £480.
In a sale the price is reduced by 15%.

4 (a) How much has the price of the laptop been reduced?
Give your answer in pounds.

.....
.....

Answer £ (2 marks)

4 (b) What percentage of the original price is the sale price?

Answer % (1 mark)

4 (c) What is the price of the laptop in the sale?

.....

Answer £ (1 mark)

Turn over for the next question



5 (a) Percy wants to buy 24 plants.
The plants cost 85p each.
Percy only has £20.

5 (a) (i) Show that Percy does **not** have enough money for 24 plants.

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

5 (a) (ii) How much more money would Percy need?

.....
Answer pence (1 mark)

5 (b) Alan also wants to buy some plants costing 85p each.
He has £20 to spend.
He wants one pot for each plant.
Pots cost £1 for a pack of six.

How many plants can he afford to buy so that each plant has a pot?
You **must** show your working.

.....
.....
.....
.....
Answer (3 marks)



6 (a) Do **not** use your calculator for this part.

Estimate the value of $3.97 + 2.06 \times 19.91$
You **must** show your working.

.....
.....

Answer (2 marks)

6 (b) Use your calculator to work out the exact value of $3.97 + 2.06 \times 19.91$

.....

Answer (1 mark)

7 In 2008, a car salesman sold new cars and used cars in the ratio 1 : 6
The number of used cars sold was 948.

7 (a) How many new cars did he sell?

.....
.....

Answer (2 marks)

7 (b) In 2009, the salesman sold the same number of used cars but only half the number of
new cars as in 2008.

Work out the ratio of new cars to used cars he sold in 2009.
Give your answer in its simplest form.

.....
.....

Answer (2 marks)



8 You are given 1 mile per hour = 0.44 metres per second

A car travels 100 metres in 7 seconds.
The speed limit for the road is 30 miles per hour.

Is the car travelling over the speed limit?
You **must** show your working.

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

(4 marks)

9 Write 100 as the product of prime factors.
Give your answer in index form.

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

Answer (3 marks)

END OF SECTION A

