

**Paper Reference 4MA1/2F**  
**Pearson Edexcel**  
**International GCSE**

Total Marks
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**Mathematics A**  
**PAPER 2F**  
**Foundation Tier**  
**(Calculator)**

**Friday 10 November 2023 – Morning**

**Time: 2 hours**

**In the boxes below, write your name, centre number and candidate number.**

<b>Surname</b>					
<b>Other names</b>					
<b>Centre Number</b>					
<b>Candidate Number</b>					

**X73467A**

**YOU MUST HAVE**

**Ruler, protractor, compasses, writing and drawing equipment, calculator. Tracing paper may be used.**

**YOU WILL BE GIVEN**

**Diagram Booklet  
Formulae Pages**

**INSTRUCTIONS**

**Answer ALL questions.**

**Without sufficient working, correct answers may be awarded no marks.**

**Answer the questions in the spaces provided in this Question Paper or on the separate diagrams – there may be more space than you need.**

**CALCULATORS MAY BE USED.**

**You must NOT write anything on the Formulae Pages.**

**Anything you write on the Formulae Pages will gain NO credit.**

## **INFORMATION**

The total mark for this paper is **100**.

The marks for **EACH** question are shown in brackets – use this as a guide as to how much time to spend on each question.

You may be provided with models for **Question 16**  
They are **NOT** accurate.

You may be provided with a cutout shape for  
**Question 19(a)**  
It is accurate.

There may be spare copies of some diagrams in case you need them.

## **ADVICE**

Read each question carefully before you start to answer it.

Check your answers if you have time at the end.

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**Answer ALL TWENTY SIX questions.**

**Write your answers in the spaces provided.**

**You must write down all the stages in your working.**

1. Look at the table for Question 1 in the Diagram Booklet.

It gives information about the weight of sugar produced by each of five countries in one year.

- (a) Write the number **28 149** in words.

(1 mark)

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- (b) Which of these five countries produced the greatest weight of sugar?

(1 mark)

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(continued on the next page)

1. continued.

(c) Write down the value of the **8** in the number  
**23 787**

(1 mark)

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(d) Write the number **15 745** correct to the nearest  
thousand.

(1 mark)

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(Total for Question 1 is 4 marks)

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2. Look at the diagram for Question 2 in the Diagram Booklet.

It is an incomplete pictogram giving information about the number of parcels a company posted on each of four days last week.

- (a) How many parcels were posted on Tuesday?  
(1 mark)

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**24** parcels were posted on Friday.

- (b) Show this information on the pictogram.  
(1 mark)

(continued on the next page)

2. continued.

More parcels were posted on Wednesday than on Monday.

(c) How many more?

(1 mark)

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(continued on the next page)

2. continued.

(d) Find the ratio

number of parcels posted on Monday : number  
of parcels posted on Thursday

Give your answer in its simplest form.

(2 marks)

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(Total for Question 2 is 5 marks)

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3. (a) Write  $0.03$  as a fraction.  
(1 mark)

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- (b) Write  $0.9$  as a percentage.  
(1 mark)

\_\_\_\_\_ %

(continued on the next page)

3. continued.

(c) Write these five decimals in order of size.

Start with the smallest decimal.

0.4      0.48      0.204      0.24      0.408

(1 mark)

---

(continued on the next page)

3. continued.

(d) Work out

$$0.93 + \frac{7}{10}$$

Give your answer as a decimal.

(1 mark)

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**(Total for Question 3 is 4 marks)**

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4. Barney went for 4 walks on Tuesday.

The lengths of the walks were

800 metres

2 kilometres

1.7 kilometres

x metres

The total length of the 4 walks was 6250 metres.

Work out the value of x

(3 marks)

Answer space continues on the next page.

4. continued.

**x =** \_\_\_\_\_

**(Total for Question 4 is 3 marks)**

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5. There are 8 counters in a bag.

6 of these counters are orange.

The rest of the counters are purple.

Delilah takes at random a counter from the bag.

(i) Look at the diagram for Question 5(i) in the Diagram Booklet.

It is a probability scale.

On the probability scale, mark the probability that the counter is orange.

(ii) Look at the diagram for Question 5(ii) in the Diagram Booklet.

It is a probability scale.

On the probability scale, mark the probability that the counter is yellow.

(Total for Question 5 is 2 marks)

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6. (a) Look at the diagram for Question 6(a) in the Diagram Booklet.

It is a grid.

On the grid, draw a right-angled triangle.

(1 mark)

(b) Look at the diagram for Question 6(b) in the Diagram Booklet.

It is a grid.

1 square length on the grid represents 1 cm

On the grid, draw a rectangle with an area of  $20 \text{ cm}^2$

(2 marks)

(Total for Question 6 is 3 marks)

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7. (a) Write 4 30 pm as a time in the 24-hour clock.  
(1 mark)
- 

Look at the table for Question 7(b) in the  
Diagram Booklet.

It shows part of a bus timetable from Beetown to  
Pilton.

The bus should take more time to get from Beetown  
to Corthill than from Corthill to Pilton.

- (b) How much more time?

Give your answer in minutes.

(3 marks)

Answer space continues on the next page.

7. (b) continued.

\_\_\_\_\_ minutes

**(Total for Question 7 is 4 marks)**

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8. Look at the diagram for Question 8 in the Diagram Booklet.

It is NOT accurately drawn.

**ABCD** and **EFGH** are straight lines.

**KFBJ** and **MGCL** are parallel straight lines.

angle **ABJ** =  $125^\circ$

angle **BFG** =  $32^\circ$

angle **FGM** =  $x^\circ$

angle **LCD** =  $y^\circ$

- (a) Write down the value of **X**  
(1 mark)

**X** = \_\_\_\_\_

(continued on the next page)

8. continued.

- (b) (i) Work out the value of  $y$   
(2 marks)

$$y = \underline{\hspace{10cm}}$$

- (ii) Give a reason for your answer to (b) (i)  
(1 mark)

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**(Total for Question 8 is 4 marks)**

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9. **3 kg** of carrots and **5 kg** of potatoes cost a total of **207 rand**.  
**2 kg** of the carrots cost **48 rand**.

**Work out the cost of 1 kg of potatoes.**

**(4 marks)**

**Answer space continues on the next page.**

9. continued.

\_\_\_\_\_ rand

**(Total for Question 9 is 4 marks)**

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10. Look at the diagram for Question 10(a) in the Diagram Booklet.

It is a number machine.

When the input is 7 the output is 60

(a) Work out the value of  $y$   
(2 marks)

$y =$  \_\_\_\_\_

(continued on the next page)

10. continued.

Look at the diagram for Question 10(b) in the Diagram Booklet.

It is a different number machine.

The input is  $X$

(b) Write down an expression, in terms of  $X$ , for the output.

(2 marks)

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(Total for Question 10 is 4 marks)

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11. Look at the diagram for Question 11 in the Diagram Booklet.

It is a graph that can be used to change between Australian dollars and euros.

(a) Use the graph to change

(i) **40 Australian dollars to euros**

(1 mark)

\_\_\_\_\_ euros

(ii) **35 euros to Australian dollars**

(1 mark)

\_\_\_\_\_ Australian dollars

(continued on the next page)

11. continued.

Lachlan changes **400** Australian dollars to euros.

(b) Work out how many euros he should receive.

(2 marks)

\_\_\_\_\_ euros

(Total for Question 11 is 4 marks)

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12. (a) Expand  
 $y(y + 3)$   
(1 mark)
- 

- (b) Factorise  
 $8p + 10$   
(1 mark)
- 

(continued on the next page)

12. continued.

(c) Make  $t$  the subject of

$$x = tv - m$$

(2 marks)

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(continued on the next page)

12. continued.

Janya thinks of a whole number.

She calls her whole number  $W$

Janya writes down this information about her whole number.

$$w > 7 \quad \text{and} \quad w \leq 10$$

(d) Write down the possible values of  $W$   
(2 marks)

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(Total for Question 12 is 6 marks)

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13. Bella buys **150** football shirts for a total cost of **1800** dollars.

She gives **10%** of the shirts to the local football team.

Bella sells the rest of the shirts for  **$g$**  dollars each. She makes a total profit of **360** dollars.

Work out the value of  **$g$**   
(4 marks)

Answer space continues on the next two pages.

13. continued.

13. continued.

$g =$  \_\_\_\_\_

(Total for Question 13 is 4 marks)

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14. Work out the value of

$$\frac{5 \cdot 2^2 + 8 \cdot 7}{\sqrt{14 \cdot 5}}$$

Write down all the figures on your calculator display.

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(Total for Question 14 is 2 marks)

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**15. Look at the information for Question 15 in the Diagram Booklet.**

**Yuan sells fudge in small bags and in large bags.**

**Work out which bag is the better value for money.**

**Show your working clearly.**

**(3 marks)**

**Answer space continues on the next page.**

**15. continued.**

**(Total for Question 15 is 3 marks)**

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16. Look at the diagram for Question 16 in the Diagram Booklet.

You may be provided with two models.

They are NOT accurate.

The diagram shows a crate and a box.

Model 1 represents the crate.

Model 2 represents the box.

A crate is in the shape of a cuboid with inside lengths of 120 cm, 40 cm and  $h$  cm

The crate has a lid.

Micah has 48 boxes.

Each box is in the shape of a cube 20 cm by 20 cm by 20 cm

Micah wants to put all the boxes in the crate and shut the lid.

(continued on the next page)

16. continued.

Work out the least possible value of  $h$

(4 marks)

Answer space continues on the next page.

16. continued.

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**(Total for Question 16 is 4 marks)**

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17. Look at the table for Question 17 in the Diagram Booklet.

It shows information about the lengths, in minutes, of **50** telephone calls.

(a) Write down the modal class.

(1 mark)

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(continued on the next page)

17. continued.

(b) Work out an estimate for the total length, in minutes, of these telephone calls.

(3 marks)

\_\_\_\_\_ minutes

(Total for Question 17 is 4 marks)

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18. Look at the diagram for Question 18 in the Diagram Booklet.

It is NOT accurately drawn.

It shows triangle **ABC** and triangle **ECD**

**ACD** and **EBC** are straight lines.

$$AB = 10 \text{ cm}$$

$$AC = 8 \text{ cm}$$

$$EB = 5 \text{ cm}$$

$$CD = 14 \text{ cm}$$

$$ED = w \text{ cm}$$

Angle **ECD** is a right angle.

Work out the value of **w**

Give your answer correct to one decimal place.

(4 marks)

Answer space continues on the next two pages.

18. continued.

18. continued.

**W =** \_\_\_\_\_

**(Total for Question 18 is 4 marks)**

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19. (a) Look at the diagram for Question 19(a) in the Diagram Booklet.

It shows shape **T** on a grid.

Reflect shape **T** in the line  $y = x$

A cutout shape may be available if you wish to use it.

(2 marks)

(b) Look at the diagram for Question 19(b) in the Diagram Booklet.

It shows triangle **A** and triangle **B** on a grid.

Describe fully the single transformation that maps triangle **A** onto triangle **B**

(3 marks)

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(Total for Question 19 is 5 marks)

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20. (a) Solve

$$\frac{2t + 5}{6} = 2t - 5$$

Show clear algebraic working.

(3 marks)

**t** = \_\_\_\_\_

(continued on the next page)

20. continued.

(b) Simplify

$$p^{15} \div p^3$$

(1 mark)

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(c) Simplify fully

$$(2m^3q^5)^4$$

(2 marks)

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(continued on the next page)

20. continued.

(d) Given that

$$\frac{y^5 \times y^n}{y^7} = y^{12}$$

work out the value of  $n$

(2 marks)

$n =$  \_\_\_\_\_

(Total for Question 20 is 8 marks)

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**21. Avril bakes a cake.**

**She uses flour, butter and sugar such that**

**weight of flour : weight of butter = 6 : 5**

**weight of butter : weight of sugar = 3 : 2**

**Avril uses 120 grams of sugar.**

**Work out the weight of flour Avril uses.**

**(3 marks)**

**Answer space continues on the next page.**

21. continued.

\_\_\_\_\_ grams

**(Total for Question 21 is 3 marks)**

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22. Show that

$$3\frac{3}{7} \div 2\frac{2}{3} = 1\frac{2}{7}$$

(3 marks)

Answer space continues on the next page.

22. continued.

**(Total for Question 22 is 3 marks)**

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23. Hermione buys a boat for \$26 800

The value of the boat depreciates by 8% each year.

Work out the value of the boat at the end of 3 years.

Give your answer correct to the nearest dollar.

\$ \_\_\_\_\_

(Total for Question 23 is 3 marks)

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24. The mean number of goals scored by a hockey team in 8 matches is 6

The team plays 2 more matches and scores  $k$  goals in each match.

The mean number of goals scored by the hockey team in the 10 matches is 7

Work out the value of  $k$

(3 marks)

Answer space continues on the next page.

24. continued.

$k =$  \_\_\_\_\_

(Total for Question 24 is 3 marks)

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25. A straight line passes through the points with coordinates  $(0, -3)$  and  $(2, 0)$

Find an equation of the line.

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(Total for Question 25 is 2 marks)

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26. Look at the diagram for Question 26 in the Diagram Booklet.

It is NOT accurately drawn.

It shows a hexagon **ABCDEF**

$$AB = 25 \text{ cm}$$

$$BC = (y + 2) \text{ cm}$$

$$CD = 8 \text{ cm}$$

$$EF = 7 \text{ cm}$$

$$AF = (y + 6) \text{ cm}$$

All the marked angles are right angles.

The area of hexagon **ABCDEF** is  $258 \text{ cm}^2$

Work out the value of  $y$

(5 marks)

Answer space continues on the next page.

26. continued.

$y =$  \_\_\_\_\_

(Total for Question 26 is 5 marks)

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**TOTAL FOR PAPER IS 100 MARKS**

**END OF PAPER**

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