

**Paper Reference 4MA1/1FR
Pearson Edexcel
International GCSE**

Total Marks

**Mathematics A
PAPER 1FR
Foundation Tier
(Calculator)**

Time: 2 hours plus your additional time allowance

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

Surname					
Other names					
Centre Number					
Candidate Number					

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.

Turn over

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.

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

You may be provided with a shape for Question 12

You may be provided with a model for Question 24

ADVICE

Read each question carefully before you start to answer it.

Check your answers if you have time at the end.

Answer ALL TWENTY FOUR questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

7

1. **10** **15** **23** **25**
 27 **28** **33** **35**

**(a) From the eight numbers above,
write down**

(i) an even number

(ii) a multiple of 9

(continued on the next page)

Turn over

1. (a) continued.

Remember:

10	15	23	25
27	28	33	35

**From the eight numbers above,
write down**

**(iii) a prime number
(3 marks)**

(continued on the next page)

Turn over

1. continued.

**Look at the diagram for Question 1(b)
in the Diagram Booklet.**

It shows four cards.

Each card has a number on it.

**The four cards are arranged to make
the number **7358****

(continued on the next page)

1. continued.

Look at the diagram for

Question 1(b)(i) in the

Diagram Booklet.

It shows four blank cards.

**(b) (i) Show how the original
four cards can be arranged
to make the smallest number
using all four cards.**

(continued on the next page)

1. (b) continued.

**Look at the diagram for
Question 1(b)(ii) in the
Diagram Booklet.**

**It shows an incomplete
calculation.**

**(ii) Show how the original
four cards can be arranged
to make a correct calculation
in the Diagram Booklet.**

(2 marks)

(Total for Question 1 is 5 marks)

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

It shows three shapes labelled A, B and C

Shape A is a triangle.

(a) Write down the mathematical name for this type of triangle.
(1 mark)

(continued on the next page)

Turn over

2. continued.

Shape B is a rectangle.

**(b) On shape B in the
Diagram Booklet, draw its lines
of symmetry.**

(1 mark)

(continued on the next page)

2. continued.

Shape C is a regular polygon.

(c) Write down the order of rotational symmetry of shape C

(1 mark)

(Total for Question 2 is 3 marks)

3. (a) Change 6 metres into centimetres.

(1 mark)

_____ centimetres

(b) Change 4500 grams into kilograms.

(1 mark)

_____ kilograms

(continued on the next page)

Turn over

3. continued.

Lauren has 3 litres of fruit juice.

She is going to use the fruit juice to make some drinks for a party.

Each cup of drink will contain 225 millilitres of fruit juice.

Lauren is going to make as many cups of drink as possible.

(c) Work out how much fruit juice Lauren has left when she has made as many cups of drink as possible.

Give your answer in millilitres.

(4 marks)

Answer space is on the next page.

Turn over

3. (c) continued.

_____ millilitres

(Total for Question 3 is 6 marks)

Turn over

4. Look at the diagram for Question 4 in the Diagram Booklet.

It shows an incomplete pictogram.

40 people were asked to name their favourite type of holiday.

The pictogram in the Diagram Booklet gives information about the number of these people who said each of City Break or Beach or Walking.

(continued on the next page)

4. continued.

(a) How many of these people said

Beach?

(1 mark)



(continued on the next page)

4. continued.

4 people said Cruise.

9 people said Skiing.

**(b) Show this information on the
pictogram in the
Diagram Booklet.
(2 marks)**

(continued on the next page)

4. continued.

One person from the 40 people asked is selected at random.

(c) Find the probability that this person said City Break.

(2 marks)

(Total for Question 4 is 5 marks)

Turn over

5. Below are the first 4 terms of a number sequence.

7 12 17 22

(a) (i) Write down the next term of the sequence.

(1 mark)



(continued on the next page)

5. (a) continued.

**(ii) Explain how you worked out
your answer.**

(1 mark)

(continued on the next page)

5. continued.

Remember:

**Below are the first 4 terms of
a number sequence.**

7

12

17

22

**(b) Is 256 a number in the
sequence?**

**Mark one of the boxes below and
give a reason on the next page
for your answer.**

Yes

No

Turn over

5. (b) continued.

Give a reason for your answer.

(1 mark)

(Total for Question 5 is 3 marks)

6. (a) Write the five numbers below in order of size.

Start with the smallest number.

0.47

0.4

0.74

0.477

0.407

(1 mark)

(continued on the next page)

Turn over

6. continued.

(b) Write

0.7 as a fraction.

(1 mark)

(continued on the next page)

Turn over

6. continued.

(c) Write

30 as a fraction of 48

**Give your fraction in its
simplest form.**

(2 marks)



(continued on the next page)

Turn over

6. continued.

(d) Write

23% as a decimal.

(1 mark)



(continued on the next page)

Turn over

6. continued.

Rita has some beads in a bag.

Of these beads, Rita gives

$\frac{1}{2}$ to Sheng

and $\frac{2}{5}$ to Tusco

Rita now has 3 beads left in the bag.

(e) Work out how many beads Rita originally had in the bag.

(3 marks)

Answer space continues on the next page.

Turn over

6. (e) continued.

(Total for Question 6 is 8 marks)

Turn over

7. (a) Simplify

$$3p + 5q - p + 2q$$

(2 marks)

(b) Simplify

$$8t \times 5u$$

(1 mark)

(continued on the next page)

Turn over

7. continued.

(c) Solve

$$5r - 3 = 8$$

(2 marks)

$r =$ _____

(Total for Question 7 is 5 marks)

Turn over

8. Look at the diagram for Question 8(a) in the Diagram Booklet.

It is NOT accurately drawn.

ABC is a straight line and **BCD** is a triangle.

$$\text{angle BDC} = 93^\circ$$

$$\text{angle DCB} = 42^\circ$$

$$\text{angle ABD} = x^\circ$$

(continued on the next page)

8. continued.

**(a) Work out the value of x
(2 marks)**

$x =$ _____

(continued on the next page)

Turn over

8. continued.

**Look at the diagram for Question 8(b)
in the Diagram Booklet.**

It is NOT accurately drawn.

**It shows four straight lines,
PO, RO, SO and TO**

angle POR = 100°

angle ROS is a right angle.

angle SOT = 114°

angle TOP = y°

(continued on the next page)

8. continued.

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

$y =$ _____

**(ii) Give a reason for your
answer.**

(1 mark)

(Total for Question 8 is 5 marks)

Turn over

- 9. Look at the information for Question 9 in the Diagram Booklet. In November, Andre received a monthly salary of 2500 euros.**

The information in the Diagram Booklet shows how he spent his monthly salary.

**Work out how much of his November monthly salary Andre spent on food.
(4 marks)**

Answer space continues on the next two pages.

9. continued.

Turn over

9. continued.

_____ euros

(Total for Question 9 is 4 marks)

Turn over

10. Look at the diagram for Question 10 in the Diagram Booklet.

It shows an incomplete Venn diagram.

50 students have lessons at a dance school.

Two of the lessons are ballet lessons (B) and tap lessons (T)

(continued on the next page)

10. continued.

Of the 50 students

31 have ballet lessons

27 have tap lessons

**18 have ballet lessons and
tap lessons**

**Complete the Venn diagram in the
Diagram Booklet for this information.**

(Total for Question 10 is 3 marks)

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

It shows information about the number of eggs laid by each of 36 hens in one week.

Work out the mean number of eggs laid.

(3 marks)

Answer space continues on the next page.

11. continued.

(Total for Question 11 is 3 marks)

Turn over

12. Look at the diagram for Question 12 in the Diagram Booklet.

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

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

- (a) Describe fully the single transformation that maps triangle A onto triangle B (2 marks)**

(continued on the next page)

Turn over

12. continued.

- (b) On the grid in the
Diagram Booklet, enlarge
triangle **A** with scale factor **2** and
centre **O**
Label your triangle **C**
(2 marks)**

(Total for Question 12 is 4 marks)

13. (a) Factorise

$$6x - 15$$

(1 mark)

(continued on the next page)

13. continued.

**Look at the information
for Question 13(b) in the
Diagram Booklet.**

**(b) Write down a formula for T in
terms of p and q
(3 marks)**

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

13. (b) continued.

(Total for Question 13 is 4 marks)

14. Work out the value of

$$\sqrt{7 \cdot 4} + \frac{5 \cdot 1^2}{3}$$

Write down all the figures on your calculator display.

(Total for Question 14 is 2 marks)

Turn over

15. n is an integer.

(a) Write down all the values of n

such that

$$\mathbf{-2 \leq n < 3}$$

(2 marks)

(continued on the next page)

Turn over

15. continued.

**Look at the diagram for
Question 15(b) in the
Diagram Booklet.**

It shows a number line.

- (b) On the number line, represent the
inequality $y \leq 1$
(1 mark)**

(Total for Question 15 is 3 marks)

16. Each time John plays a game, the probability that he wins the game is 0.65

John is going to play the game 300 times.

Work out an estimate for the number of games that John wins.

(2 marks)

Answer space continues on the next page.

16. continued.

(Total for Question 16 is 2 marks)

Turn over

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

It is NOT accurately drawn.

It shows a shaded shape made using three identical right-angled triangles and a square.

The hypotenuse of each triangle is 16 cm and the longer of the other two sides is 12.8 cm

Work out the perimeter of the shaded shape.

(4 marks)

Answer space is on the next two pages.

17. continued.

Turn over

17. continued.

_____ cm

(Total for Question 17 is 4 marks)

Turn over

18. (a) Complete the table of values below for

$$y = x^2 - 4x + 3$$

There are four spaces to fill.

(2 marks)

x	y
-2	
-1	8
0	3
1	
2	
3	0
4	

(continued on the next page)

Turn over

18. continued.

Look at the diagram for

Question 18(b) in the

Diagram Booklet.

It shows a blank grid.

(b) On the grid, draw the graph of

$$**y = x^2 - 4x + 3** \text{ for values of } **x**$$

from -2 to 4

(2 marks)

(Total for Question 18 is 4 marks)

19. Yusuf sat 8 examinations.

Below are his marks for 5 of the examinations.

68 72 75 77 80

For his results in all 8 examinations

the mode of his marks is 80

the median of his marks is 74

the range of his marks is 16

(continued on the next page)

19. continued.

Find Yusuf's marks for each of the other 3 examinations.

(4 marks)

Answer space continues on the next page.

19. continued.

(Total for Question 19 is 4 marks)

Turn over

- 20. (a) Work out the lowest common multiple (LCM) of 36 and 120
(2 marks)**



(continued on the next page)

Turn over

20. continued.

$$A = 5^2 \times 7^4 \times 11^p$$

$$B = 5^m \times 7^{n-5} \times 11$$

m , n and p are integers such that

$$m > 2$$

$$n > 10$$

$$p > 1$$

(b) Find the highest common factor (HCF) of A and B

Give your answer as a product of powers of its prime factors.

(2 marks)

Answer space is on the next page.

20. (b) continued.

(Total for Question 20 is 4 marks)

Turn over

21. Look at the information for Question 21 in the Diagram Booklet.

Work out Milly's average speed, in km/h, for the journey from Anesey to Duckbridge.

Give your answer correct to one decimal place.

(4 marks)

Answer space continues on the next two pages.

21. continued.

Turn over

21. continued.

_____ **km/h**

(Total for Question 21 is 4 marks)

Turn over

22. (a) Write

5×10^4 as an ordinary number.

(1 mark)

(continued on the next page)

Turn over

22. continued.

(b) Write

0·000 06 in standard form.

(1 mark)

(continued on the next page)

Turn over

22. continued.

(c) Work out

$$(4 \times 10^{512}) \div (1.6 \times 10^{700})$$

Give your answer in

standard form.

(2 marks)

Answer space continues on the

next page.

22. (c) continued.

(Total for Question 22 is 4 marks)

23. (a) Simplify
 $m^4 \times m^5$
(1 mark)



(continued on the next page)

23. continued.

(b) Simplify

$$(4y^2)^3$$

(2 marks)

(continued on the next page)

Turn over

23. continued.

(c) Factorise

$$n^2 - 7n + 12$$

(2 marks)

(Total for Question 23 is 5 marks)

Turn over

24. Look at the diagram for Question 24 in the Diagram Booklet.

You may be provided with a model.

They are NOT accurate.

Jonty has a storage container in the shape of a cuboid, as shown by the diagram and the model.

It has length 12 metres and width 2.5 metres and height 3 metres.

(continued on the next page)

24. continued.

Jonty is going to paint the outside of his storage container, apart from the base which is shown shaded.

The base has length 12 metres and width 2.5 metres.

He needs enough paint to cover the four sides and the top.

Each tin of paint covers an area of 15m^2

The cost of each tin of paint recently increased by 10%

AFTER the increase, the cost of each tin of paint is £26.95

(continued on the next page)

Turn over

24. continued.

Jonty says

“BEFORE the increase, I could have bought enough paint for less than £200”

Show that Jonty is correct.

Show your working clearly.

(6 marks)

Answer space continues on the next three pages.

Turn over

24. continued.

Turn over

24. continued.

Turn over

24. continued.

(Total for Question 24 is 6 marks)

TOTAL FOR PAPER IS 100 MARKS

END OF PAPER
