

Paper Reference 4MA1/1F
Pearson Edexcel
International GCSE

Total Marks

Mathematics A
PAPER 1F
Foundation Tier
(Calculator)

Time: 2 hours

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.

ADVICE

Read each question carefully before you start to answer it.

Check your answers if you have time at the end.

Answer ALL TWENTY FIVE 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 six plays written by William Shakespeare.

(a) Which of these six plays has the greatest number of words?

(1 mark)

(continued on the next page)

1. continued.

Two of these six plays were written in the same year.

(b) Write down the name of each of these plays.

(1 mark)

_____ and _____

(continued on the next page)

1. continued.

The play Othello has 9329 more words in it than the play Macbeth.

(c) Work out the number of words in the play Othello.

(1 mark)

(continued on the next page)

Turn over

1. continued.

(d) Write the number 21 055 in words.

(1 mark)

(Total for Question 1 is 4 marks)

- 2. Luca has 5 kg of chopped tomatoes.
He also has some empty tins.**

**When full, each tin holds 350 grams
of chopped tomatoes.**

**Luca fills as many tins as possible
with the chopped tomatoes.**

**Work out the weight of the chopped
tomatoes remaining after Luca has
filled as many tins as possible.**

Give the units of your answer.

(4 marks)

**Answer space is on the next two
pages.**

2. continued.

Turn over

2. continued.

(Total for Question 2 is 4 marks)

Turn over

3. Look at the diagram for Question 3 in the Diagram Booklet.

It shows a sequence of patterns made from squares.

**(a) In the Diagram Booklet,
Pattern number 4 has been
started.**

**Complete Pattern number 4
(1 mark)**

(continued on the next page)

3. continued.

(b) Complete the table.

There are two spaces to fill.

(1 mark)

Pattern number	Number of squares
1	1
2	4
3	7
4	
5	

(continued on the next page)

Turn over

3. continued.

**(c) Work out the number of squares
in Pattern number 8
(1 mark)**

(continued on the next page)

3. continued.

Angus says

**“there are 42 squares in Pattern
number 15”**

Angus is incorrect.

(continued on the next page)

3. continued.

(d) Explain why.

(1 mark)

(Total for Question 3 is 4 marks)

4. (a) Write 0.8 as a percentage.
(1 mark)

_____ %

- (b) Write down the value of the 3 in
the number 4.7634
(1 mark)

(continued on the next page)

4. continued.

(c) There are five decimals shown below.

Write these decimals in order of size.

Start with the smallest decimal.

0·204 0·24 0·04 0·2 0·042

(1 mark)

(continued on the next page)

Turn over

4. continued.

**(d) Write 25.78621 correct to
2 decimal places.**

(1 mark)

(continued on the next page)

4. continued.

(e) Find the square root of 1296

(1 mark)

(Total for Question 4 is 5 marks)

- 5. Adam has eight packets of noodles.
Here is the flavour of noodles in each packet.**

**Hot and
Spicy**

Curry

Vegetarian

**Hot and
Spicy**

Curry

**Hot and
Spicy**

Curry

**Hot and
Spicy**

**Adam takes at random a packet of
noodles.**

(continued on the next page)

Turn over

5. continued.

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

It shows a probability scale.

(a) (i) On the probability scale in the Diagram Booklet, mark the probability that Adam takes a packet of Hot and Spicy noodles.

(1 mark)

(continued on the next page)

5. (a) continued.

(ii) Circle the word in the list below that best describes the likelihood that Adam takes a packet of Vegetarian noodles.

(1 mark)

impossible

unlikely

even

likely

certain

(continued on the next page)

Turn over

5. continued.

Belinda asks 20 people to name the type of rice that they each like the best.

Look at the information and the table for Question 5(b) in the Diagram Booklet.

It shows Belinda's results and a frequency table for the results.

(b) Complete the frequency table for Belinda's results.

(2 marks)

(Total for Question 5 is 4 marks)

6. Sandeep sells 600 tickets for an event.

He receives a total of \$7200 from selling the tickets.

$\frac{1}{4}$ of the tickets sold are child tickets.

The rest of the tickets sold are adult tickets.

The cost of an adult ticket is \$13.60

Work out the cost of a child ticket.

(4 marks)

Answer space is on the next two pages.

6. continued.

Turn over

6. continued.

\$ _____

(Total for Question 6 is 4 marks)

Turn over

7. (a) Simplify

$$5p \times 9k$$

(1 mark)

(b) Simplify

$$3m + 2n + 8m - 7n$$

(2 marks)

(continued on the next page)

Turn over

7. continued.

(c) Solve

$$2r + 7 = 16$$

(2 marks)

$r =$ _____

(Total for Question 7 is 5 marks)

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

It shows a scale drawing showing the positions of Paris and Bordeaux.

Alain drives from Paris to Bordeaux.

The distance that he drives is

590 km

This distance is greater than the actual straight line distance between Paris and Bordeaux.

(continued on the next page)

8. continued.

How much greater?

Show your working clearly.

(4 marks)

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

8. continued.

_____ **km**

(Total for Question 8 is 4 marks)

9. Look at the diagram for Question 9 in the Diagram Booklet.

It shows Avner's two fair spinners.

Spinner A can land on 1, 2 or 3

Spinner B can land on 1, 2, 3 or 4

Avner MULTIPLIES the number on which spinner A lands by the number on which spinner B lands to find his score.

(continued on the next page)

9. continued.

Look at the table for Question 9(a) in the Diagram Booklet.

(a) Complete the table in the Diagram Booklet to show all possible scores.

Seven of the scores have been completed for you.

There are five spaces to fill.

(2 marks)

(continued on the next page)

9. continued.

**Avner spins spinner *A* once and
spinner *B* once.**

**(b) Find the probability that his
score is an odd number.**

(1 mark)

(Total for Question 9 is 3 marks)

10. Orange squash is made from orange juice and water.

Sean has two different cartons of orange squash, carton P and carton Q

Look at the information for Question 10 in the Diagram Booklet. It gives information about the two cartons.

(continued on the next page)

10. continued.

Work out the difference in the volume of orange juice in carton P and the volume of orange juice in carton Q (3 marks)

Answer space continues on the next page.

10. continued.

_____ **millilitres**

(Total for Question 10 is 3 marks)

Turn over

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

On the grid in the Diagram Booklet, draw the graph of

$y = 1 - 2x$ for values of x from -2 to 3

(3 marks)

Answer space continues on the next page.

11. continued.

(Total for Question 11 is 3 marks)

Turn over

12. (a) Show that

$$\frac{7}{8} - \frac{5}{12} = \frac{11}{24}$$

(2 marks)

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

12. (a) continued.

(continued on the next page)

12. continued.

**(b) Find the highest common factor
(HCF) of 130 and 208**

Show your working clearly.

(2 marks)

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

12. (b) continued.

(Total for Question 12 is 4 marks)

Turn over

13. (a) Given that

$$\mathbf{p = t - uv}$$

$$\mathbf{t = 18}$$

$$\mathbf{u = -3}$$

$$\mathbf{v = 5}$$

work out the value of p

(2 marks)

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

13. (a) continued.

p = _____

(continued on the next page)

Turn over

13. continued.

(b) Make x the subject of the formula

$$y = 3x + 10$$

(2 marks)

Answer space continues on the next page.

13. (b) continued.

(Total for Question 13 is 4 marks)

Turn over

- 14. (a) Look at the diagram for Question 14(a) in the Diagram Booklet.**
- Describe fully the single transformation that maps triangle **A** onto triangle **B****
- (2 marks)**

(continued on the next page)

14. continued.

**(b) Look at the diagram for
Question 14(b) in the
Diagram Booklet.**

**Describe fully the single
transformation that maps
triangle C onto triangle D
(2 marks)**

(Total for Question 14 is 4 marks)

Turn over

15. Look at the diagram for Question 15 in the Diagram Booklet.

It is NOT accurately drawn.

It shows a floor plan of a stage.

The plan is formed from a triangle and a rectangle.

The length of the rectangle is 4·8 metres.

The width of the rectangle is 3 metres.

The vertical height of the triangle is 2·5 metres.

(continued on the next page)

15. continued.

The stage manager is going to paint the floor.

One tin of paint covers an area of 1.8 m^2

One tin of paint costs \$16.40

Paint can only be bought in full tins.

The stage manager has \$190 to spend.

(continued on the next page)

Turn over

15. continued.

Does the stage manager have enough money to buy enough tins to paint all of the floor?

Show your working clearly.

(5 marks)

Answer space continues on the next page.

15. continued.

(Total for Question 15 is 5 marks)

Turn over

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

80 students entered a dancing competition.

The table gives information about the length of time, in minutes, for which each student spent dancing.

Work out an estimate for the mean length of time the students spent dancing.

(4 marks)

Answer space is on the next two pages.

16. continued.

Turn over

16. continued.

_____ minutes

(Total for Question 16 is 4 marks)

17. Solve

$$3(2 - 4x) = 5 - 8x$$

Show clear algebraic working.

(3 marks)

Answer space continues on the next page.

17. continued.

X = _____

(Total for Question 17 is 3 marks)

Turn over

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

Use ruler and compasses only to construct the perpendicular bisector of line AB

You must show all your construction lines.

(Total for Question 18 is 2 marks)

19. Look at the diagram for Question 19 in the Diagram Booklet.

It is NOT accurately drawn.

It shows a pentagon $ABCDE$

Angle $ABC = 119^\circ$

Angle $BCD = 67^\circ$

Angle $CDE = 135^\circ$

DEA is a right angle

Angle EAB is marked x°

Work out the value of x

(3 marks)

Answer space is on the next two pages.

19. continued.

Turn over

19. continued.

$$\mathbf{X} = \underline{\hspace{10cm}}$$

(Total for Question 19 is 3 marks)

20. In a box, there are only green sweets, orange sweets and yellow sweets.

There are 280 sweets in the box so that

the number of green sweets : the number of orange sweets = 2 : 3

and

the number of orange sweets : the number of yellow sweets = 1 : 5

(continued on the next page)

20. continued.

**Work out how many green sweets
there are in the box.**

(3 marks)

**Answer space continues on the next
two pages.**

20. continued.

Turn over

20. continued.

(Total for Question 20 is 3 marks)

Turn over

21. Shane bought a car.

**The amount Shane paid for the car
was \$32 000**

Theresa also bought a car.

**To pay for this car, Theresa paid a
deposit of \$18 000 together with
14 monthly payments of \$1160**

**Theresa paid more for her car than
Shane paid for his car.**

(continued on the next page)

21. continued.

(a) Work out how much more

**Theresa paid as a percentage of
the amount Shane paid.**

(4 marks)

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

21. (a) continued.

_____ %

(continued on the next page)

Turn over

21. continued.

Kylie bought a van.

**After 1 year, the value of the van was
\$39 865**

**During this year, the value of the van
decreased by 15%**

(continued on the next page)

21. continued.

**(b) Work out the value of the van
when Kylie bought it.**

(3 marks)

\$_____

(Total for Question 21 is 7 marks)

Turn over

22. Look at the table for Question 22 in the Diagram Booklet.

Some members of a library were asked to name the type of book that they each liked to read the best.

One of the members is chosen at random.

The table shows information about the probability of the type of book that this member answered.

48 members answered comedy books.

(continued on the next page)

22. continued.

**Work out how many of the members
answered mystery books.**

(4 marks)

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

22. continued.

(Total for Question 22 is 4 marks)

Turn over

23. Look at the diagram for Question 23 in the Diagram Booklet.

It is NOT accurately drawn.

The diagram shows a triangle ABC inside a semicircle.

A , B and C are points on the semicircle.

AB is the diameter of the semicircle.

Angle $ACB = 90^\circ$

Angle $BAC = 50^\circ$

$AC = 18\text{ cm}$

(continued on the next page)

23. continued.

Work out the perimeter of the semicircle.

Give your answer correct to 2 significant figures.

(5 marks)

Answer space continues on the next three pages.

23. continued.

Turn over

23. continued.

Turn over

23. continued.

_____ **cm**

(Total for Question 23 is 5 marks)

Turn over

24. (a) Write

$$\mathbf{6 \cdot 25 \times 10^{-4}}$$

as an ordinary number.

(1 mark)

(continued on the next page)

24. continued.

(b) Work out

$$(2.4 \times 10^{12}) \div (9.6 \times 10^4)$$

Give your answer in standard form.

(2 marks)

Answer space continues on the next page.

24. (b) continued.

(Total for Question 24 is 3 marks)

25. (a) Factorise

$$y^2 - 2y - 48$$

(2 marks)

(continued on the next page)

25. continued.

**Look at the diagram for Question 25(b)
in the Diagram Booklet.**

**(b) Write down the inequality
shown on the number line in the
Diagram Booklet.**

(1 mark)

(continued on the next page)

25. continued.

(c) Solve the inequality

$$7w + 6 > 12w + 14$$

(3 marks)

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

25. (c) continued.

(Total for Question 25 is 6 marks)

TOTAL FOR PAPER IS 100 MARKS

END OF PAPER
