

Paper Reference 4MA1/2F
Pearson Edexcel
International GCSE

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| Total Marks |
|-------------|

Mathematics A
PAPER 2F
Foundation Tier
(Calculator)

Time: 2 hours plus your additional time allowance.

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

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|---------------------|--|--|--|--|--|
| 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 Book
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 2(c) and
Question 24
They are NOT accurate.**

There may be spare copies of some diagrams.

ADVICE

**Read each question carefully before you start to
answer it.**

Check your answers if you have time at the end.

Good luck with your examination.

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 Book.

It shows the length, in kilometres, of the coastline of each of five oceans.

- (a) Which of these oceans has the greatest length of coastline?

(1 mark)

- (b) Write the number **17 968** in words.

(1 mark)

(continued on the next page)

1. continued.

(c) Write the number **66 526** correct to the nearest thousand.

(1 mark)

(d) Work out the total length of the coastlines of the Arctic Ocean and the Pacific Ocean.

(1 mark)

_____ kilometres

(Total for Question 1 is 4 marks)

Turn over

2. (a) Write down the order of rotational symmetry of a square.

(1 mark)

- (b) (i) Look at the diagram for Question 2(b) in the Diagram Book.

Measure the size of the angle marked X



- (ii) Write down the mathematical name of this type of angle.

(2 marks)

(continued on the next page)

Turn over

2. continued.

Look at the diagram for Question 2(c) in the Diagram Book.

You may be provided with a model.

They show a 3-D shape.

(c) (i) Write down the mathematical name of the 3-D shape.

**(ii) How many edges does the shape have?
(2 marks)**

(Total for Question 2 is 5 marks)

Turn over

- 3. Look at the diagram for Question 3 in the Diagram Book.**

It is a pictogram which gives some information about the number of parcels delivered by a delivery company on each of five days last week.

On Monday, the delivery company delivered 20 parcels.

Work out the total number of parcels delivered by the delivery company on these five days.

(4 marks)

Answer space continues on the next page.

3. continued.

(Total for Question 3 is 4 marks)

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

It shows a grid.

The points **A**, **B** and **C**, shown on the grid, are the vertices of triangle **ABC**

- (a) Write down the coordinates of the point **B**
(1 mark)

(_____ , _____)

- (b) Write down the mathematical name of
triangle **ABC**
(1 mark)

(continued on the next page)

4. continued.

The coordinates of point **D** are $(1, -4)$

(c) On the grid, mark the position of **D**
Label the point **D**

(1 mark)

(d) Find the coordinates of the midpoint of **AB**
(2 marks)

(_____ , _____)

(Total for Question 4 is 5 marks)

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

It shows a shape made of squares.

- (a) Shade $\frac{3}{5}$ of the shape in the Diagram Book.

(1 mark)

- (b) Which one of these five fractions is NOT equivalent to $\frac{4}{7}$?

$$\frac{40}{70} \quad \frac{8}{14} \quad \frac{400}{700} \quad \frac{14}{17} \quad \frac{20}{35}$$

(1 mark)

(continued on the next page)

5. continued.

(c) Write $\frac{3}{10}$ as a percentage.

(1 mark)

_____ %

(d) Write $\frac{77}{9}$ as a mixed number.

(1 mark)

(continued on the next page)

5. continued.

Given that

$\frac{5}{6}$ of a number is 40

(e) what is the number?

(2 marks)

(Total for Question 5 is 6 marks)

6. The cost of a mobile phone in the UK is £350
The cost of an identical mobile phone in India is
28 938 rupees.

The exchange rate is £1 = 91 rupees.

The cost of the mobile phone in the UK is more than
the cost of the mobile phone in India.

Work out how much more.

(3 marks)

Answer space continues on the next page.

6. continued.

(Total for Question 6 is 3 marks)

7. Look at the table for Question 7 in the Diagram Book.

It shows a menu at a restaurant.

Hassan is going to eat at the restaurant.

Hassan is going to choose one starter and one main course from the menu.

List all the possible combinations that Hassan can choose.

(Total for Question 7 is 2 marks)

Turn over

8. (a) Simplify

$$w \times w \times w \times w \times w$$

(1 mark)

(b) Simplify

$$5p \times 3r$$

(1 mark)

(continued on the next page)

Turn over

8. continued.

(c) Simplify

$$3m + 2q - m + 5q$$

(2 marks)

(continued on the next page)

Turn over

8. continued.

(d) Solve

$$5y - 7 = y + 12$$

Show clear algebraic working.

(3 marks)

Answer space continues on the next page.

8. (d) continued.

$y =$ _____

(Total for Question 8 is 7 marks)

Turn over

9. Look at the table for Question 9 in the Diagram Book.

It shows information about the number of pieces of homework each student in Year 11 received last week.

- (a) Work out the range of the number of pieces of homework.

(2 marks)

(continued on the next page)

9. continued.

**(b) Write down the mode of the number of pieces
of homework.**

(1 mark)

(continued on the next page)

9. continued.

(c) Work out the mean number of pieces of homework.

Give your answer correct to one decimal place.

(3 marks)

(Total for Question 9 is 6 marks)

Turn over

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

ABC is a triangle.

AB = 11 cm and BC = 9.5 cm

Angle ABC = 65°

Draw accurately the triangle ABC

The line AB has been drawn for you in the Diagram Book.

(Total for Question 10 is 2 marks)

11. A circle has radius 7.5 cm

Work out the area of the circle.

Give your answer correct to 3 significant figures.

_____ cm^2

(Total for Question 11 is 2 marks)

12. Look at the two formulae for Question 12 in the Diagram Book.

The formula for Question 12(a) can be used to work out the cost, in riyals, of hiring a bicycle in Qatar for a number of days.

Ghalia hired a bicycle in Qatar for 14 days.

**(a) Work out the cost.
(2 marks)**

_____ riyals

(continued on the next page)

Turn over

12. continued.

The formula for Question 12(b) can be used to work out the cost, in riyals, of hiring a helmet in Qatar for a number of days.

Kasun wants to hire a bicycle and a helmet for the same number of days.

He wants to hire them for as many days as he can.

He has 750 riyals to spend.

(b) Work out how much of the 750 riyals is not spent.

(4 marks)

Answer space continues on the next page.

12. (b) continued.

_____ riyals

(Total for Question 12 is 6 marks)

Turn over

13. There are some counters in a bag.

7 of the counters are blue.

5 of the counters are green.

The rest of the counters are yellow.

One counter is going to be taken at random from the bag.

The probability that the counter is blue or is green

is $\frac{6}{13}$

Work out how many yellow counters there are in the bag.

(3 marks)

Answer space continues on the next page.

13. continued.

(Total for Question 13 is 3 marks)

Turn over

14. (a) Work out
39% of 450
(2 marks)

- (b) Write one pair of brackets in the calculation below so that the answer is correct.

$$9 \times 8 - 5 - 2 = 25$$

(1 mark)

(continued on the next page)

Turn over

14. continued.

(c) Work out the value of

$$\frac{\sqrt{8 \cdot 9}}{6 \cdot 2 - 3 \cdot 5}$$

Give your answer as a decimal.

Write down all the figures on your calculator display.

(2 marks)

(Total for Question 14 is 5 marks)

Turn over

15. Write 600 as a product of powers of its prime factors.

Show your working clearly.

(3 marks)

Answer space continues on the next page.

15. continued.

(Total for Question 15 is 3 marks)

16. Show that

$$2\frac{4}{7} \div 1\frac{1}{8} = 2\frac{2}{7}$$

(3 marks)

Answer space continues on the next page.

16. continued.

(Total for Question 16 is 3 marks)

Turn over

17. The bearing of Paris from London is 149°

Work out the bearing of London from Paris.

○

(Total for Question 17 is 2 marks)

Turn over

18. $\mathcal{E} = \{\text{letters of the alphabet}\}$

$B = \{b, r, a, z, i, l\}$

$I = \{i, r, e, l, a, n, d\}$

(a) List the members of the set

(i) $B \cup I$

(ii) $B \cap I'$

(2 marks)

(continued on the next page)

Turn over

18. continued.

Remember:

$\mathcal{E} = \{\text{letters of the alphabet}\}$

$B = \{b, r, a, z, i, l\}$

$I = \{i, r, e, l, a, n, d\}$

$K = \{k, e, n, y, a\}$

Cody writes down the statement $B \cap K = \emptyset$

Cody's statement is wrong.

(b) Explain why.

(1 mark)

(Total for Question 18 is 3 marks)

Turn over

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

It is NOT accurately drawn.

ABCD and **FGHI** are parallel straight lines.

EBGJ and **ECH** are straight lines.

$$BE = CE$$

$$\text{Angle } BEC = 44^\circ$$

Work out the size of angle **JGH**

Give a reason for each stage of your working.

(5 marks)

Answer space continues on the next page.

19. continued.

○

(Total for Question 19 is 5 marks)

Turn over

20. Mariana sells bags of bird food.

The bags that Mariana sold last week each contained 12 kg of seeds.

The bags that she is going to sell next week will each contain a mixture of nuts and seeds where for each bag

weight of nuts : weight of seeds = 4 : 5

The total weight of the nuts and the seeds in each bag will be 19.35 kg

The weight of seeds in each bag that Mariana sells next week will be less than the weight of seeds in each bag that Mariana sold last week.

(continued on the next page)

20. continued.

Work out this decrease as a percentage of the weight of seeds in each bag that Mariana sold last week.

Give your answer correct to one decimal place.

(4 marks)

Answer space continues on the next page.

20. continued.

_____ %

(Total for Question 20 is 4 marks)

Turn over

21. Look at the diagram for Question 21 in the Diagram Book.

It is NOT accurately drawn.

It shows a right-angled triangle ABC

$AB = x \text{ cm}$

$AC = 6.5 \text{ cm}$

Angle $ABC = 42^\circ$

Angle ACB is a right-angle.

Work out the value of x

Give your answer correct to one decimal place.

(3 marks)

Answer space continues on the next page.

21. continued.

X = _____

(Total for Question 21 is 3 marks)

Turn over

22. Solve the simultaneous equations

$$5r + 2t = 10$$

$$2r - 4t = 7$$

Show clear algebraic working.

(3 marks)

Answer space continues on the next page.

22. continued.

r = _____

t = _____

(Total for Question 22 is 3 marks)

Turn over

23. (i) Factorise

$$y^2 + 2y - 24$$

(2 marks)

(ii) Hence solve

$$y^2 + 2y - 24 = 0$$

(1 mark)

(Total for Question 23 is 3 marks)

Turn over

24. Look at Diagram 1 and Diagram 2 for Question 24 in the Diagram Book.

You may be provided with a model.

They are NOT accurate.

Diagram 1 and the model show a triangular prism, $ABCDEF$

Diagram 2 shows the cross section of the prism, AED

$$\mathbf{BC = AD = 11.2 \text{ cm}}$$

$$\mathbf{DC = EF = AB = 15 \text{ cm}}$$

$$\mathbf{ED = FC = 7.4 \text{ cm}}$$

Angles AED and BFC are right angles.

Work out the volume of the prism.

Give your answer correct to 3 significant figures.

(5 marks)

Answer space continues on the next two pages.

24. continued.

Turn over

24. continued.

_____ cm^3

(Total for Question 24 is 5 marks)

25. Chengbo sold a house for 180 000 yuan.

The amount for which he sold the house is
24% more than the amount he paid for the house.

(a) Work out how much Chengbo paid for
the house.

Give your answer correct to 3 significant figures.

(3 marks)

_____ yuan

(continued on the next page)

Turn over

25. continued.

Zhi bought a house on 1st January 2017

**When she bought the house, its value was
120 000 yuan.**

**The value of the house increased by
1.8% per year.**

**(b) Work out the value of Zhi's house on
1st January 2020**

Give your answer correct to 3 significant figures.

(3 marks)

Answer space continues on the next page.

25. (b) continued.

_____ yuan

(Total for Question 25 is 6 marks)

TOTAL FOR PAPER IS 100 MARKS

END OF PAPER
