

Paper Reference 1MA1/1F
Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Total Marks

Mathematics
PAPER 1
(Non-Calculator)
Foundation Tier

Time: 1 hour 30 minutes 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. Tracing paper may be used.

YOU WILL BE GIVEN

Diagram Booklet

INSTRUCTIONS

Answer ALL questions.

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

You must SHOW ALL YOUR WORKING.

Diagrams are NOT accurately drawn, unless otherwise indicated.

CALCULATORS MAY NOT BE USED.

Turn over

INFORMATION

The total mark for this paper is 80

**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 6(b),
Question 25 and Question 26
They are NOT 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.**

Try to answer every question.

Check your answers if you have time at the end.

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1. Write $\frac{3}{10}$ as a percentage.

_____ %

(Total for Question 1 is 1 mark)

2. Write the following six numbers in order of size.
Start with the smallest number.

8 -7 -10 1 0 -2

(Total for Question 2 is 1 mark)

3. Write $\frac{9}{100}$ as a decimal.

(Total for Question 3 is 1 mark)

4. Write **327** correct to the nearest ten.

(Total for Question 4 is 1 mark)

5. Write down the value of 7^2

(Total for Question 5 is 1 mark)

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

It shows a quadrilateral labelled **ABCD**

AB is parallel to **DC**

- (a) Write down the mathematical name of the quadrilateral.

(1 mark)

(continued on the next page)

6. continued.

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

You may be provided with a model.

They show a 3–D shape.

**(b) Write down the mathematical name of the
3–D shape.**

(1 mark)

(Total for Question 6 is 2 marks)

Turn over

7. **£42** is shared equally between **3** friends.
How much does each friend get?

£ _____

(Total for Question 7 is 2 marks)

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

It shows a bar chart.

Grace recorded the eye colour of each of the students in her class.

The frequency table below shows her results.

Eye colour	Frequency
blue	10
brown	15
green	4

Grace then drew the bar chart in the Diagram Booklet for this information.

(continued on the next page)

8. continued.

**Write down one thing that is wrong with the
bar chart.**

(Total for Question 8 is 1 mark)

9. Danny buys,

1 loaf of bread for £1·20

1 bottle of milk for 70 pence

2 packets of cheese for £2·30 each packet

Danny pays with a £10 note.

He says, “I should get £3·30 change.”

Is Danny correct?

You must show how you get your answer.

(Total for Question 9 is 3 marks)

Turn over

10. Rachel records the temperature in her garden at noon each day.

On Monday, the temperature was 5°C

On Tuesday, the temperature was 10° less than the temperature on Monday.

On Wednesday, the temperature was 3° greater than the temperature on Tuesday.

Find the difference between the temperature on Monday and the temperature on Wednesday.

You must show all your working.

(2 marks)

Answer space continues on the next page.

10. continued.

_____ °C

(Total for Question 10 is 2 marks)

Turn over

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

It is an incomplete pictogram which shows information about the number of video games sold in a shop on Monday, on Tuesday and on Wednesday.

**(a) How many video games were sold on Monday?
(1 mark)**

(continued on the next page)

11. continued.

More video games were sold on Tuesday than on Wednesday.

**(b) How many more?
(2 marks)**

(continued on the next page)

11. continued.

On Thursday and Friday, a total of 32 video games were sold in the shop.

$\frac{1}{4}$ of these 32 video games were sold in the shop on Thursday.

(c) Complete the pictogram in the Diagram Booklet for Thursday and Friday.

(3 marks)

(Total for Question 11 is 6 marks)

12. There are two drama groups in a school.

In one group there are 36 boys and 48 girls.

In the other group, $\frac{3}{7}$ of the students are boys and the rest of the students are girls.

Ann says,

“The ratio of the number of boys to the number of girls is the same for both groups.”

Is Ann correct?

You must show how you get your answer.

(3 marks)

Answer space continues on the next page.

12. continued.

(Total for Question 12 is 3 marks)

Turn over

13. A number sequence starts with the three numbers shown below.

1 2 4

Emma says that the next term is 7

(a) Explain why Emma may be correct.
(1 mark)

(continued on the next page)

13. continued.

Below are the first four terms of the sequence of triangle numbers.

1 3 6 10

**(b) Find the 8th term of this sequence.
(2 marks)**

(Total for Question 13 is 3 marks)

Turn over

14. 3 kg of carrots cost £1.80

2 kg of carrots and 5 kg of potatoes cost a total of
£3.45

Work out the total cost of 4 kg of carrots and
2 kg of potatoes.

You must show all your working.

(4 marks)

Answer space continues on the next page.

14. continued.

£ _____

(Total for Question 14 is 4 marks)

Turn over

15. (a) Expand
 $2(p + q)$
(1 mark)
-

- (b) Factorise
 $6y^2 - 5y$
(1 mark)
-

(continued on the next page)

Turn over

15. continued.

(c) Solve

$$4x - 7 = 37$$

(2 marks)

x = _____

(Total for Question 15 is 4 marks)

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

It shows a kite **ABCD**

$$AB = (4x - 2) \text{ cm}$$

Jasper says that **x** could be **0.5**

- (a) Explain why Jasper cannot be correct.
(1 mark)

(continued on the next page)

16. continued.

(b) Find the value of x , when $AD = 3AB$

The kite has a perimeter of 64 cm

(3 marks)

$x =$ _____

(Total for Question 16 is 4 marks)

Turn over

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

It shows a recipe.

Heidi wants to make some biscuits using the recipe in the Diagram Booklet.

Heidi thinks that she has,

500 grams butter

700 grams flour

250 grams sugar

Assuming that these weights are correct,

(a) work out the greatest number of biscuits Heidi can make.

You must show all your working.

(4 marks)

Answer space continues on the next page.

17. (a) continued.

(continued on the next page)

Turn over

17. continued.

Heidi is wrong.

She has more than 250 grams of sugar.

(b) Does this affect the greatest number of biscuits

Heidi can make?

Give a reason for your answer.

(1 mark)

(Total for Question 17 is 5 marks)

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

It shows a grid.

On the grid, draw the graph of

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

(Total for Question 18 is 3 marks)

Turn over

35

19. Robin buys a watch for £80

He sells the watch for £56

Work out his percentage loss.

_____ %

(Total for Question 19 is 3 marks)

Turn over

20. (a) Work out

$$3.67 \times 4.2$$

(3 marks)

(continued on the next page)

Turn over

20. continued.

(b) Work out

$$59.84 \div 1.6$$

(3 marks)

(Total for Question 20 is 6 marks)

Turn over

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

It shows an incomplete Venn diagram.

$$\mathcal{E} = \{\text{even numbers less than } 19\}$$

$$A = \{6, 12, 18\}$$

$$B = \{2, 6, 14, 18\}$$

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

(Total for Question 21 is 3 marks)

22. Work out

$$4\frac{1}{5} - 2\frac{2}{3}$$

Give your answer as a mixed number.

(Total for Question 22 is 3 marks)

Turn over

23. At the end of 2017

the value of Tamara's house was £220 000

the value of Rahim's house was £160 000

At the end of 2019

the value of Tamara's house had decreased by 20%

the value of Rahim's house had increased by 30%

At the end of 2019, whose house had the greater value?

You must show how you get your answer.

(4 marks)

Answer space continues on the next page.

23. continued.

(Total for Question 23 is 4 marks)

Turn over

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

Rosie, Matilda and Ibrahim collect stickers.

Ibrahim has 24 more stickers than Matilda.

Ibrahim has more stickers than Rosie.

How many more?

(3 marks)

Answer space continues on the next page.

24. continued.

(Total for Question 24 is 3 marks)

Turn over

25. Look at Diagram 1 and Diagram 2 for Question 25 in the Diagram Booklet.

You may be provided with a model.

Diagram 1 and the model show a prism.

The cross section of the prism shown in Diagram 2 is a right-angled triangle labelled ABC

Angle ABC is a right angle.

The base of the triangle, $BC = 5 \text{ cm}$

The prism has length 25 cm

The prism has volume 750 cm^3

Work out the height of the prism.

(3 marks)

Answer space continues on the next page.

25. continued.

_____ cm

(Total for Question 25 is 3 marks)

Turn over

26. Look at Diagram 1, Diagram 2 and the formula for Question 26 in the Diagram Booklet.

You may be provided with two models.

Diagram 1 and Model A show a cube with edges of length x cm

Diagram 2 and Model B show a sphere of radius 3 cm

The surface area of the cube is equal to the surface area of the sphere.

Show that $x = \sqrt{k\pi}$ where k is an integer.
(4 marks)

Answer space continues on the next page.

26. continued.

(Total for Question 26 is 4 marks)

Turn over

27. Freddie measured the length of a pencil as 7.2 cm correct to 1 decimal place.

Complete the error interval for the length, $p \text{ cm}$, of the pencil.

$$\underline{\hspace{2cm}} \leq p < \underline{\hspace{2cm}}$$

(Total for Question 27 is 2 marks)

28. The equation of a straight line **L** is
 $y = 3 - 4x$

(i) Write down the gradient of **L**
(1 mark)

(continued on the next page)

28. continued.

**(ii) Write down the coordinates of the point where
L crosses the y-axis.**

(1 mark)

(_____ , _____)

(Total for Question 28 is 2 marks)

TOTAL FOR PAPER IS 80 MARKS

END OF PAPER
