

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

Total Marks

Mathematics
Paper 1
(Non–Calculator)
Foundation Tier

Tuesday 5 November 2019 – Morning
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 Book

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.

There may be spare copies of some diagrams.

ADVICE

Read each question carefully before you start to answer it.

Keep an eye on the time.

Try to answer every question.

Check your answers if you have time at the end.

5

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

Turn over

1. Write down the value of the 7 in the number 1074

(Total for Question 1 is 1 mark)

**2. Write 4.58 correct to
1 decimal place.**

(Total for Question 2 is 1 mark)

3. Work out

$$31.7 \times 100$$

(Total for Question 3 is 1 mark)

Turn over

4. Write the fraction $\frac{28}{70}$ in its simplest form.

(Total for Question 4 is 1 mark)

5. Write 15% as a decimal.

(Total for Question 5 is 1 mark)

6. Look at the diagram for Question 6 in the Diagram Book.

The incomplete pictogram shows information about the number of pictures sold in an art shop in each of January, February and March.

(a) Write down the number of pictures sold in January.

(1 mark)

(continued on the next page)

Turn over

6. continued.

12 pictures were sold in April.

**(b) Show this information on the
pictogram.**

(1 mark)

(continued on the next page)

6. continued.

**(c) What was the total number of
pictures sold in these
four months?
(2 marks)**

(Total for Question 6 is 4 marks)

Turn over

7. Work out the difference, in minutes,
between 1 hour 25 minutes and
 $1\frac{1}{4}$ hours.

_____ minutes

(Total for Question 7 is 2 marks)

Turn over

8. Prasha has five blocks of wood.

The total weight of all five blocks of wood is 3 kilograms.

4 of the blocks of wood each have a weight of 650 grams.

Work out the weight, in grams, of the other block of wood.

(3 marks)

Answer space continues on the next page.

8. continued

_____ grams

(Total for Question 8 is 3 marks)

Turn over

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

PQR is a straight line.

There are three angles marked 100° , 35° and **X**

Work out the size of the angle marked **X**

(2 marks)

Answer space continues on the next page.

9. continued.

○

(Total for Question 9 is 2 marks)

Turn over

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

It shows the line BC on a coordinate grid.

- (a) Plot the point with coordinates (3, 2)
Label this point A
(1 mark)**

(continued on the next page)

10. continued.

**(b) Write down the coordinates of
the midpoint of BC
(1 mark)**

(_____ , _____)

(Total for Question 10 is 2 marks)

Turn over

11. Mason throws a coin 3 times.

**The outcome of each throw is either
Heads or Tails.**

**List all the possible outcomes of the
3 throws.**

(Total for Question 11 is 2 marks)

12. Rehan is on holiday in the USA.

He has \$200 to spend on clothes.

Rehan buys

1 pair of trainers costing \$60

3 T-shirts costing \$25 each.

**He also wants to buy a jacket
costing \$80**

(continued on the next page)

12. continued.

(a) Has Rehan got enough money to buy the jacket?

You must show how you get your answer.

(3 marks)

Answer space continues on the next page.

Turn over

12. (a) continued.

(continued on the next page)

Turn over

12. continued.

The trainers cost \$60

The exchange rate is $\$1 = \pounds 0.749$

Rehan says,

“The trainers cost less than $\pounds 40$ ”

Rehan is wrong.

**(b) Using a suitable approximation,
show working to explain why.**

(2 marks)

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

Turn over

12. (b) continued.

(Total for Question 12 is 5 marks)

Turn over

- 13. (a) Simplify**
 $2a \times 5b$
(1 mark)
-

(continued on the next page)

13. continued.

(b) Simplify

$$3e + 2f + 5e - f$$

(2 marks)

(Total for Question 13 is 3 marks)

Turn over

14. Work out

$$23 \times 15$$

(2 marks)

Answer space continues on the next page.

Turn over

14. continued.

(Total for Question 14 is 2 marks)

**15. Look at the diagram for Question 15
in the Diagram Book.**

**It shows an incomplete
frequency tree.**

120 people were at a hockey match.

**Each person was asked if they
wanted to stand or to sit to watch the
match.**

75 of the people were female

29 of the males wanted to stand

30 of the people wanted to sit

(continued on the next page)

15. continued.

(a) Use this information to complete the frequency tree.

There are six spaces to fill.

(3 marks)

(continued on the next page)

15. continued.

One of the 120 people is chosen at random.

(b) Write down the probability that this person is a male who wanted to stand.

(1 mark)

(Total for Question 15 is 4 marks)

Turn over

**16. Look at the diagram for Question 16
in the Diagram Book.**

**Steve drove from his home to his
friend's house.**

**He stayed at his friend's house and
then drove home.**

**Steve's travel graph is shown in the
Diagram Book.**

(continued on the next page)

16. continued.

**(a) For how many minutes did Steve
stay at his friend's house?**

(1 mark)

_____ **minutes**

(continued on the next page)

Turn over

16. continued.

- (b) What was Steve's average speed
on his journey home?
(2 marks)**

_____ **km/h**

(Total for Question 16 is 3 marks)

Turn over

17. When $x - 1 = 2$

work out the value of $2x^2$

(Total for Question 17 is 3 marks)

Turn over

18. Look at the diagrams for Question 18 in the Diagram Book.

The pie charts show information about the favourite animal of each student at school A and of each student at school B

There are 480 students at school A

There are 760 students at school B

Henry says,

“The same number of students at each school have tigers as their favourite animal.”

(continued on the next page)

Turn over

18. continued.

Is Henry correct?

**You must show how you get your
answer.**

(4 marks)

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

Turn over

18. continued.

(Total for Question 18 is 4 marks)

Turn over

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

It shows a number line.

**Write down the inequality shown on
the number line.**

(Total for Question 19 is 2 marks)

Turn over

20. Find the Lowest Common Multiple (LCM) of 108 and 120

(3 marks)

Answer space continues on the next page.

20. continued.

(Total for Question 20 is 3 marks)

Turn over

**21. Look at the information for
Question 21 in the Diagram Book.**

**Using the information work out the
value of n**

**You must show how you get your
answer.**

(4 marks)

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

21. continued.

n = _____

(Total for Question 21 is 4 marks)

Turn over

22. Work out

$$1\frac{3}{4} \times 1\frac{1}{3}$$

Give your answer as a mixed number.

(3 marks)

Answer space continues on the next page.

Turn over

22. continued.

(Total for Question 22 is 3 marks)

Turn over

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

Use a ruler and compasses to construct the line from the point P perpendicular to the line CD

You must show ALL construction lines.

(Total for Question 23 is 2 marks)

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

It shows triangle ABC

Angle BAC = 75°

Angle ABC = 51°

ADB is a straight line.

the size of angle DCB : the size of angle ACD = 2 : 1

**Work out the size of angle BDC
(4 marks)**

Answer space is on the next two pages.

Turn over

24. continued.

Turn over

24. continued.

○

(Total for Question 24 is 4 marks)

Turn over

**25. Look at the information for
Question 25 in the Diagram Book.**

Donna says,

**“The mean weight of the 10 bricks is
less than 7 kg”**

Is Donna correct?

**You must show how you get your
answer.**

(3 marks)

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

Turn over

25. continued.

(Total for Question 25 is 3 marks)

Turn over

26. (a) Simplify

$$(p^2)^5$$

(1 mark)

(continued on the next page)

Turn over

26. continued.

(b) Simplify

$$12x^7y^3 \div 6x^3y$$

(2 marks)

(Total for Question 26 is 3 marks)

Turn over

27. Look at the diagram for Question 27 in the Diagram Book.

**The accurate scale drawing shows the positions of port P and a lighthouse L
1 cm on the diagram represents 2 km**

**Aleena sails her boat from port P on
a bearing of 070°**

**She sails for $1\frac{1}{2}$ hours at an average
speed of 12 km/h to a port Q**

(continued on the next page)

27. continued.

Find

- (i) the distance, in km, of
port Q from lighthouse L,**
- (ii) the bearing of port Q from
lighthouse L**

(5 marks)

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

Turn over

27. continued.

distance **QL** = _____ km

bearing of **Q** from **L** = _____°

(Total for Question 27 is 5 marks)

Turn over

28. Look at the diagram for Question 28 in the Diagram Book.

It shows triangle AOB

Three angles are marked $(2x)^\circ$, $(3x)^\circ$, 10°

Angle AOB is NOT an obtuse angle.

Find the greatest value of x

You must show all your working.

(3 marks)

Answer space continues on the next two pages.

28. continued.

Turn over

28. continued.

(Total for Question 28 is 3 marks)

Turn over

29. Look at the diagram for Question 29(a) in the Diagram Book.

ABC and PQR are similar right-angled triangles.

In triangle ABC , $AC = 9$ cm and $BC = 15$ cm

In triangle PQR , $RQ = 10$ cm

angle $ABC =$ angle PQR

(continued on the next page)

29. continued.

(a) Work out the length of PR
(2 marks)

_____ **cm**

(continued on the next page)

Turn over

29. continued.

**Look at the diagram for Question 29(b)
in the Diagram Book.**

**Triangle EGH is congruent to
triangle KGF**

HGE is a right angle.

FGK is a right angle.

HK = 10 cm

HG = 4 cm

(continued on the next page)

Turn over

29. continued.

(b) Work out the length of EF
(2 marks)

_____ **cm**

(Total for Question 29 is 4 marks)

TOTAL FOR PAPER IS 80 MARKS

END OF PAPER
