# 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** | | | | | |

**X58865A**

Pearson

**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.**

## 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.**

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**Answer ALL questions.**

**Write your answers in the spaces provided.**

**You must write down all the stages in your working.**

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

_____

**(Total for Question 1 is 1 mark)**

**2. Write $4 \cdot 58$ correct to $1$ decimal place.**

_____

**(Total for Question 2 is 1 mark)**

3. Work out

$31 \cdot 7 \times 100$

_____

**(Total for Question 3 is 1 mark)**

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)

_____

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)**

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)

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)**

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

**PQR is a straight line.**

**There are three angles marked $100^\circ$, $35^\circ$ and $x$**

**Work out the size of the angle marked $x$**

_____ °

**(Total for Question 9 is 2 marks)**

**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)**

**(b) Write down the coordinates of the midpoint of $BC$**

**(1 mark)**

**( _____ , _____ )**

**(Total for Question 10 is 2 marks)**

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**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**

**(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.**

12. (a) continued.

(continued on the next page)

12. continued.

The trainers cost $60

The exchange rate is $1 = £0·749

Rehan says,

"The trainers cost less than £40"

Rehan is wrong.

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

(2 marks)

**(Total for Question 12 is 5 marks)**

13. (a) Simplify

$2a \times 5b$

(1 mark)

_____

(b) Simplify

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

(2 marks)

_____

**(Total for Question 13 is 3 marks)**

**14. Work out**

$$23 \times 15$$

**(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

(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)**

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.

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

(1 mark)

_____ minutes

(continued on the next page)

16. continued.

(b) What was Steve's average speed on his journey home?

(2 marks)

_____ km/h

(Total for Question 16 is 3 marks)

17. When $x - 1 = 2$

work out the value of $2x^2$

_____

**(Total for Question 17 is 3 marks)**

**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.”**

**Is Henry correct?**

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

**(4 marks)**

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

**18. continued.**

**(Total for Question 18 is 4 marks)**

**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)**

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)**

**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)**

22. Work out

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

Give your answer as a mixed number.

_____

(Total for Question 22 is 3 marks)

**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)**

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**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 continues on the next page.**

**24. continued.**

_____ °

**(Total for Question 24 is 4 marks)**

**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.**

**25. continued.**

**(Total for Question 25 is 3 marks)**

**26. (a) Simplify**

$$(p^2)^5$$

**(1 mark)**

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**(b) Simplify**

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

**(2 marks)**

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**(Total for Question 26 is 3 marks)**

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

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.

**27. continued.**

distance QL = _____ km

bearing of Q from L = _____°

**(Total for Question 27 is 5 marks)**

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

**It shows triangle AOB**

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

**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 page.**

**28. continued.**

**(Total for Question 28 is 3 marks)**

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

(a) Work out the length of PR

(2 marks)

_____ cm

(continued on the next page)

**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**

**(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**