

**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.**

<b>Surname</b>					
<b>Other names</b>					
<b>Centre Number</b>					
<b>Candidate Number</b>					

**Y58865A**

**YOU MUST HAVE**

**Ruler, protractor, compasses, writing and drawing equipment. Tracing paper may be used.**

**YOU WILL BE GIVEN**

**Diagram Book**

**Turn over**

# **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**

**6**

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

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

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**Turn over**

**7**

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

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

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**Turn over**

**3. Work out**

$$31.7 \times 100$$

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

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**Turn over**



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

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**(Total for Question 4 is 1 mark)**

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**10**

**5. Write 15% as a decimal.**

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**(Total for Question 5 is 1 mark)**

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**Turn over**

- 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**

**12**

**6. continued.**

**12 pictures were sold in April.**

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

**(1 mark)**

**(continued on the next page)**

**Turn over**

**6. continued.**

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

**(2 marks)**

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**(Total for Question 6 is 4 marks)**

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**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)

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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  $100^\circ$ ,  $35^\circ$  and **x**

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

(2 marks)

Answer space continues on the next page.

9. continued.

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(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)**

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**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.**

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**(Total for Question 11 is 2 marks)**

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**Turn over**

**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)**

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**Turn over**

13. (a) Simplify

$$2a \times 5b$$

(1 mark)

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(continued on the next page)

Turn over

**13. continued.**

**(b) Simplify**

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

**(2 marks)**

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

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**Turn over**

**14. Work out**

$$**23 \times 15**$$

**(2 marks)**

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

**Turn over**

**14. continued.**

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**(Total for Question 14 is 2 marks)**

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**Turn over**

**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)**

**Turn over**

**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)**

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**(Total for Question 15 is 4 marks)**

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**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)**

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**Turn over**

**37**

**17. When  $x - 1 = 2$**

**work out the value of  $2x^2$**

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

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**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.**

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**(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.**

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**(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.**

**Turn over**

**21. continued.**

**n = \_\_\_\_\_**

**(Total for Question 21 is 4 marks)**

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**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.**

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**(Total for Question 22 is 3 marks)**

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**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)**

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

**It shows triangle ABC**

**Angle BAC =  $75^\circ$**

**Angle ABC =  $51^\circ$**

**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.**

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

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**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)**

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**Turn over**

**26. (a) Simplify**

$$(p^2)^5$$

**(1 mark)**

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**(continued on the next page)**

**Turn over**

**26. continued.**

**(b) Simplify**

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

**(2 marks)**

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

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**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  $070^\circ$**

**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)**

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**Turn over**

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

**It shows triangle AOB**

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

**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 two pages.**

**28. continued.**

**Turn over**

**28. continued.**

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

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**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  $ABC$ ,  $AC = 9\text{ cm}$  and  $BC = 15\text{ cm}$**

**In triangle  $PQR$ ,  $RQ = 10\text{ cm}$**

**angle  $ABC = \text{angle } PQR$**

**(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)**

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**TOTAL FOR PAPER IS 80 MARKS**

**END OF PAPER**

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