

Write your name here

Surname	Other names
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Pearson Edexcel Centre Number Candidate Number
Level 1/Level 2 GCSE (9-1)

Mathematics		
Paper 3 (Calculator)		
Aiming for 4 Foundation Tier		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 5px;">Spring 2022 Practice Paper Time: 1 hour 30 minutes</td> <td style="width: 40%; padding: 5px;">Paper Reference 1MA1/3F</td> </tr> </table>	Spring 2022 Practice Paper Time: 1 hour 30 minutes	Paper Reference 1MA1/3F
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You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.	Total Marks
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Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- **Calculators may be used.**
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.



Information

- The total mark for this paper is 80. There are 42 questions.
- Questions have been arranged in an ascending order of mean difficulty, as found by all students in the June 2019 examinations
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

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.

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1** On Monday, Sandy pays for 2 plane tickets, 7 nights in a hotel and 2 theme park tickets.

	dollars
each plane ticket	600
each night in a hotel	120
each theme park ticket	250

Show that Sandy pays more than 2500 dollars on Monday.

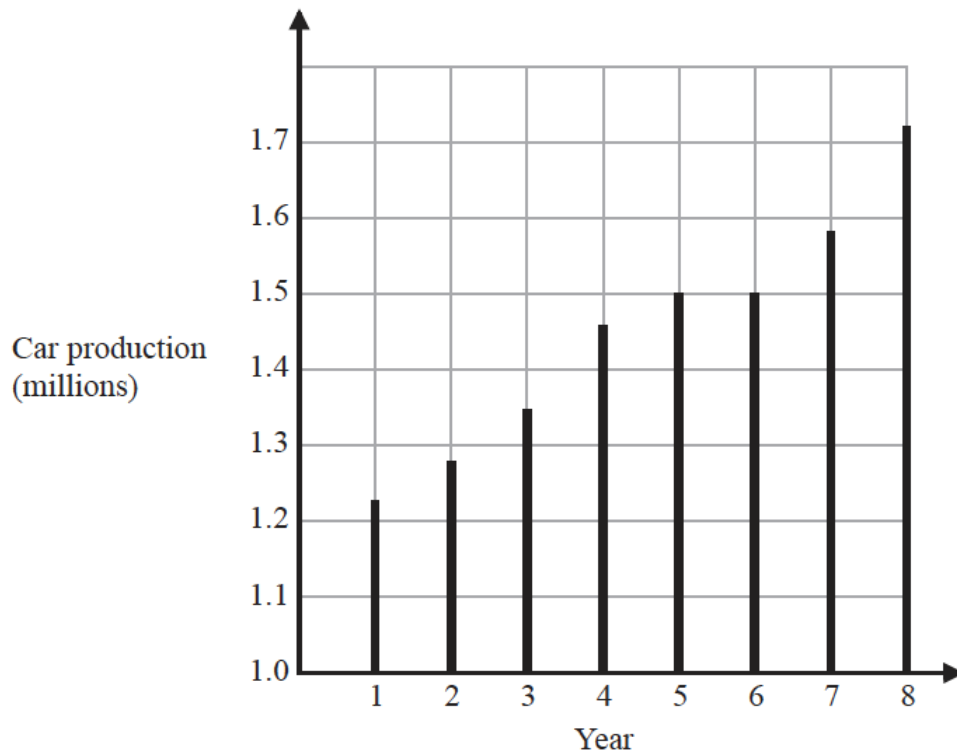
(Total for Question 1 is 3 marks)

- 2** What is the time 2 hours 40 minutes after 8.05 a.m.?

..... a.m.

(Total for Question 2 is 1 mark)

3 The graph shows some information about car production in the UK over eight years.



(a) For how many of these years was car production more than 1.4 million?

.....
(1)

(b) In which two years was car production the same?

..... ,
(1)

(Total for Question 3 is 2 marks)

- 4 Karim buys 200 tiles.
The tiles are sold in boxes.
There are 25 tiles in each box.
Each box of tiles costs £9.75

Work out the total cost of the boxes of tiles Karim buys.

£

(Total for Question 4 is 3 marks)

- 5 Write the following numbers in order of size.
Start with the smallest number.

1 -4 0 7 -6 -3 2

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

- 6 Write 45% as a decimal.

.....
(Total for Question 6 is 1 mark)

7 Write 40% as a fraction.

.....

(Total for Question 7 is 1 mark)

8 Work out 2.5^2

.....

(Total for Question 8 is 1 mark)

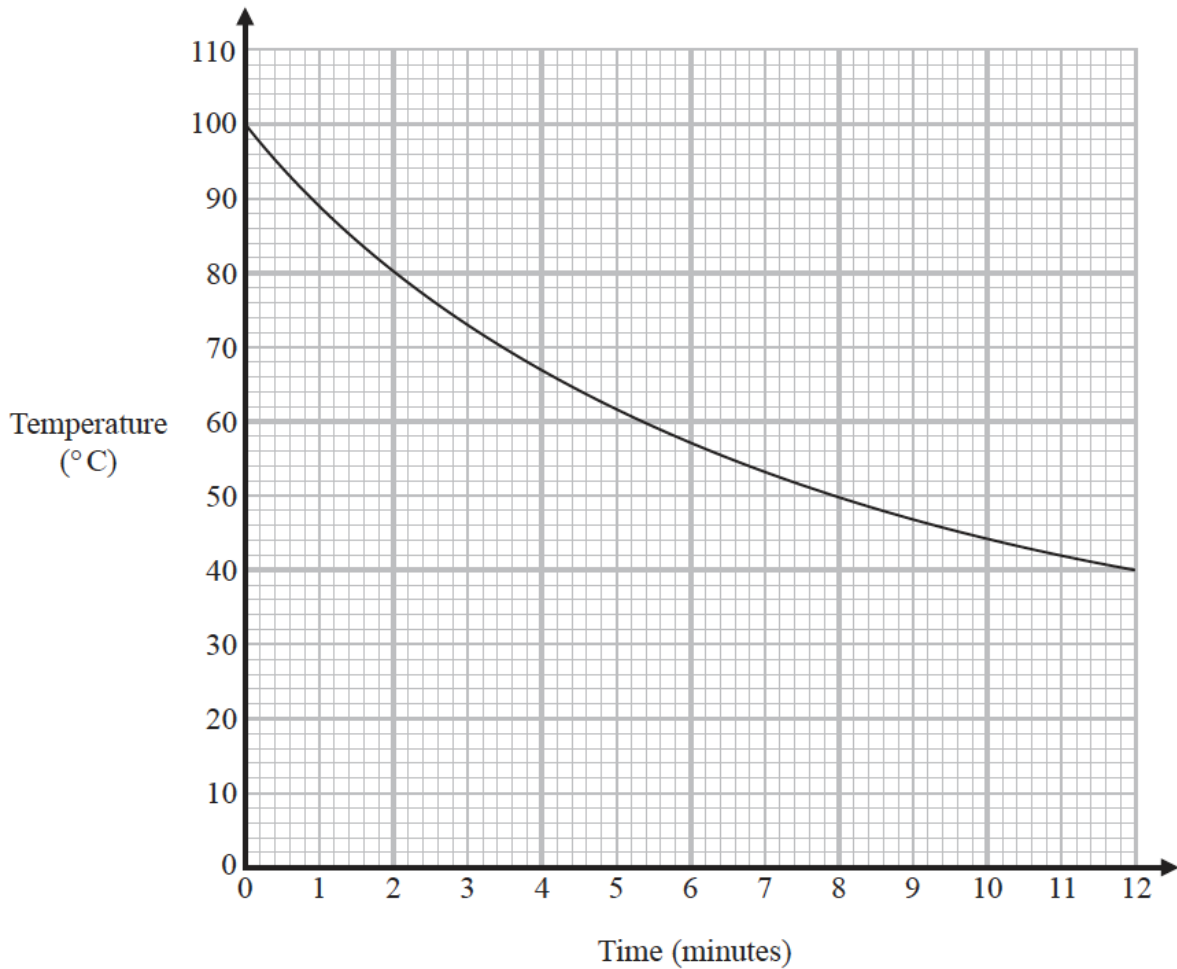
9 AB is a straight line.

Mark with a cross (X) the midpoint of AB .



(Total for Question 9 is 1 mark)

- 10 The graph shows information about the time, in minutes, a liquid has been cooling and the temperature of the liquid in °C.



- (a) What is the temperature of the liquid at time 2 minutes?

..... °C
(1)

Pam recorded the time when the liquid had a temperature of 50° C.

- (b) Write down this time.

..... minutes
(1)

Pam says that the temperature of the liquid drops more in the first 3 minutes of cooling than it does between time 9 minutes and time 12 minutes.

(c) Is Pam correct?

Give a reason for your answer.

.....
.....
.....

(1)

(Total for Question 10 is 3 marks)

11 Write down two factors of 35

.....

(Total for Question 11 is 1 mark)

- 12** Vadim has 56 clocks.
The clocks are only red, only blue or only black.

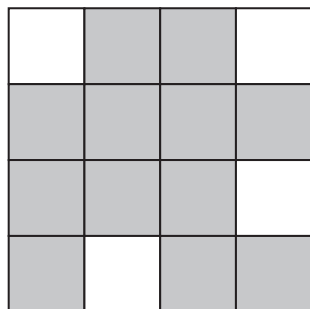
32 of the clocks are plastic.
5 of the 14 blue clocks are plastic.
8 of the 12 red clocks are **not** plastic.

Use this information to complete the two-way table.

	Red	Blue	Black	Total
Plastic				
Not plastic				
Total				

(Total for Question 12 is 3 marks)

13



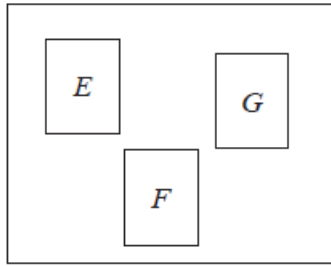
What fraction of the shape is shaded?
Give your answer in its simplest form.

.....
(Total for Question 13 is 2 marks)

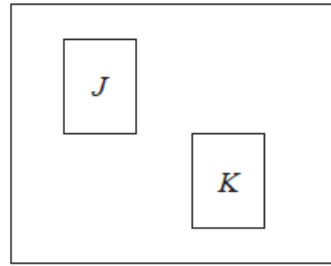
14 Work out $\frac{1}{3}$ of 24

.....
(Total for Question 14 is 1 mark)

- 15 There are three cards in bag **A** and two cards in bag **B**.
There is a letter on each card.



Bag A



Bag B

James takes a card from bag **A** and then a card from bag **B**.

List all the possible outcomes.

.....

.....

.....

(Total for Question 15 is 2 marks)

- 16 (a) Simplify $3x + 5y + 2x - 4y$

.....
(2)

- (b) Solve $5p + 7 = 22$

$p =$
(2)

(Total for Question 16 is 4 marks)

17 There are only 5 blue cards, 2 green cards and 4 red cards in a pack.

Isabella is going to take at random one card from the pack.

(a) Write down the probability that Isabella will take a blue card.

.....
(2)

Ken is going to throw a biased dice once.

The probability that the dice will land on six is 0.3

(b) What is the probability that the dice will **not** land on six?

.....
(1)

(Total for Question 17 is 3 marks)

18 Corina has £300 to spend on books.

Each book costs £4.85

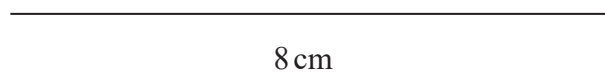
Work out the greatest number of books Corina can buy.

.....
(Total for Question 18 is 3 marks)

19 Work out $\frac{1}{6}$ of 66.

.....
(Total for Question 19 is 1 mark)

20 Draw accurately an isosceles triangle with sides of length 8 cm, 6 cm and 6 cm.
One side of the triangle has been drawn for you.



(Total for Question 20 is 2 marks)

21 Here are the costs of the same type of batteries in two shops.

<p style="text-align: center;">Shop A</p> <p style="text-align: center;">Pack of 4 batteries £1.60</p>

<p style="text-align: center;">Shop B</p> <p style="text-align: center;">Pack of 6 batteries £2.70</p>

Harry needs to buy at least 30 batteries.
He assumes that he has to buy batteries in whole packs.
Harry wants to buy the batteries as cheaply as possible from the same shop.

- (a) Which shop should he buy the batteries from, shop **A** or shop **B**?
You must show all your working.

(4)

Harry's assumption is wrong.
He can buy single batteries for 40p each in shop **A** and for 45p each in shop **B**.

- (b) Does this affect which of these two shops Harry should buy the batteries from?
Give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 21 is 5 marks)

22 Malik is going to throw a fair coin 50 times.

(a) Write down an estimate for the number of times the coin will land on heads.

.....
(1)

Paula and Simon are trying to find out if a different coin is biased.

Paula throws this coin 10 times.

She records the number of times the coin lands on heads.

Simon throws the same coin 100 times.

He records the number of times the coin lands on heads.

(b) Whose results will be more useful in deciding if the coin is biased?
Give a reason for your answer.

.....
.....
.....
(1)

(Total for Question 22 is 2 marks)

23 Change 300 centimetres into metres.

..... metres
(Total for Question 23 is 1 mark)

24 (a) Simplify $a \times b \times 4$

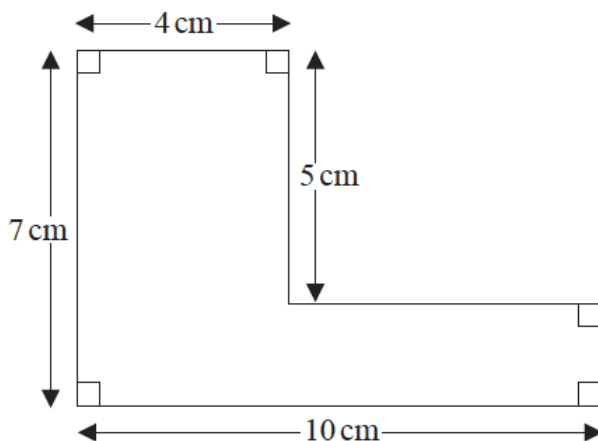
.....
(1)

(b) Simplify $4x + 3 - x + 5$

.....
(2)

(Total for Question 24 is 3 marks)

25



Work out the perimeter of this shape.

..... cm

(Total for Question 25 is 2 marks)

26 (a) Write 196 minutes in hours and minutes.

..... hours minutes

(2)

A train travels x miles in 2 hours.

(b) Write down an expression, in terms of x , for the average speed of the train.

..... miles per hour

(1)

(Total for Question 26 is 3 marks)

27 Jenna measures all the angles around a point.

Her results are 23° , 145° , 23° and 69°

Explain why these results cannot be true.

.....
.....
.....

(Total for Question 27 is 1 mark)

28 (a) Work out the value of $\frac{300}{2 \times 5}$

.....
(1)

(b) Work out the value of $(6 - 2.5)(8 + 4)$

.....
(1)

(c) Write down the reciprocal of 20

.....
(1)

(Total for Question 28 is 3 marks)

29 Here are the first five terms of a number sequence.

45 40 35 30 25

(a) (i) Write down the next two terms of this sequence.

..... ,
(1)

A term of this sequence is -5

(ii) Which term?

.....
(1)

The n th term of a different sequence is given by the expression $4n + 3$

(b) Find the 9th term of this sequence.

.....
(1)

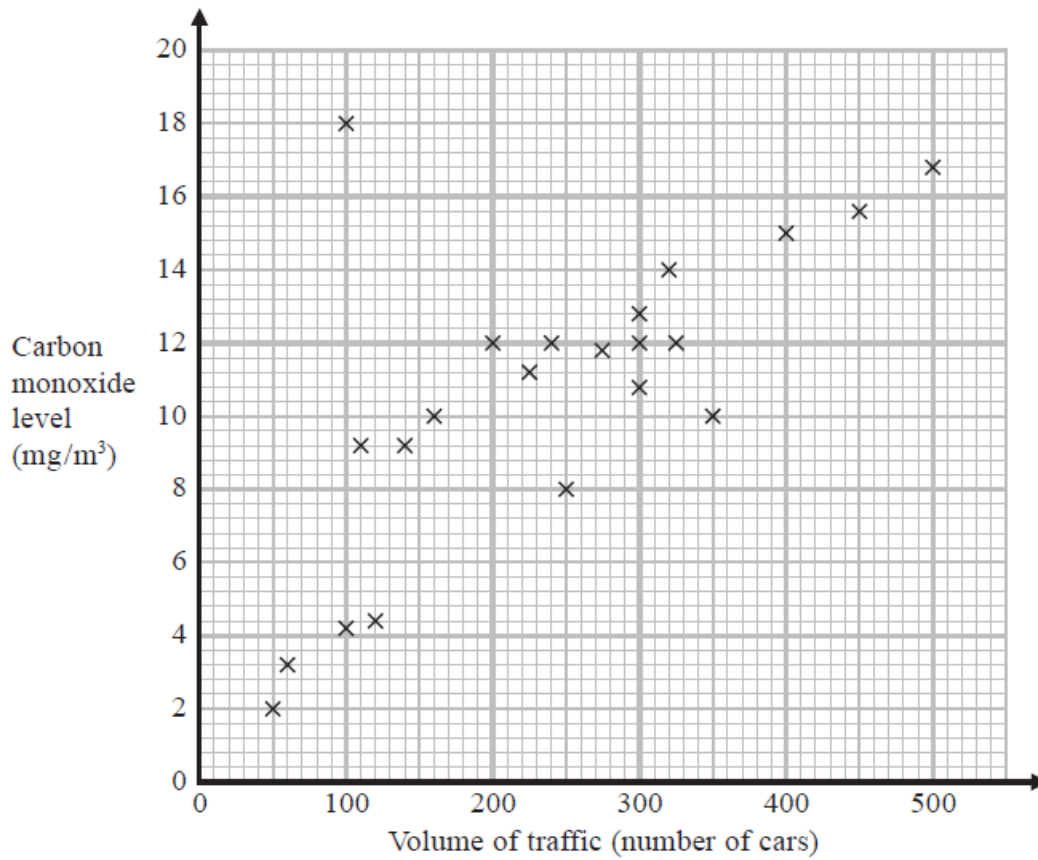
(Total for Question 29 is 3 marks)

30 A stadium cost £600 million.
 $\frac{13}{15}$ of this cost was for the building.
The rest of the cost was for the land.
Work out the cost of the land.

£..... million

(Total for Question 30 is 3 marks)

31 The scatter graph shows information about the volume of traffic and the carbon monoxide level at a point on a road each day for 22 days.



One point is an outlier.

(a) Write down the coordinates of this point.

(.....,)
(1)

For another day, 370 cars pass the point on the road.

(b) Estimate the carbon monoxide level for this day.

..... mg/m³
(2)

Alfie says,

“Because there is an outlier, there is no correlation.”

(c) Is Alfie correct?

You must give a reason for your answer.

.....

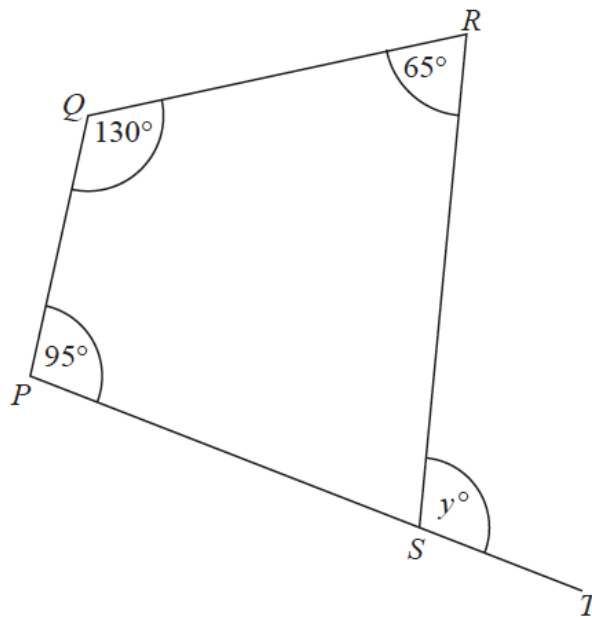
.....

.....

(1)

(Total for Question 31 is 4 marks)

32 $PQRS$ is a quadrilateral.
 PST is a straight line.



Find the value of y .

$y = \dots\dots\dots$

(Total for Question 32 is 3 marks)

33 (a) Write 4.5×10^5 as an ordinary number.

.....
(1)

(b) Write 0.007 in standard form.

.....
(1)

(c) Work out $4.2 \times 10^3 + 5.3 \times 10^2$
Give your answer in standard form.

.....
(2)

(Total for Question 33 is 4 marks)

34 Akhtar, Ben and Carl each have some money.
Akhtar has £65
Ben has £100
Carl has three £5 notes, one £20 note and some £10 notes.
The mean amount of money per person is £80
How many £10 notes does Carl have?

.....
(Total for Question 34 is 4 marks)

TOTAL FOR PAPER IS 80 MARKS

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