Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel International GCSE

Thursday 16 May 2024

Morning (Time: 2 hours)

Paper reference **4MA1/1FR**

Mathematics A
PAPER 1FR
Foundation Tier

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

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.
- Without sufficient working, correct answers may be awarded no marks.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- **Calculators may be used.**
- You must **NOT** write anything on the formulae page.
  Anything you write on the formulae page will gain NO credit.

Information

- The total mark for this paper is 100.
- 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.
- Check your answers if you have time at the end.

Turn over ▶

P73464A

©2024 Pearson Education Ltd.
F:1/1/1/1/1/1/1/1/

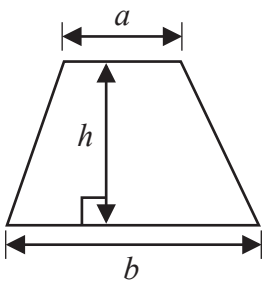
P 7 3 4 6 4 A 0 1 2 4

Pearson

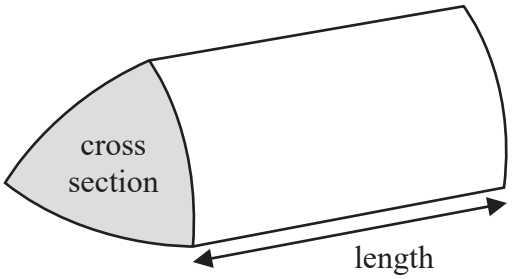
International GCSE Mathematics

Formulae sheet – Foundation Tier

Area of trapezium = $\frac{1}{2}(a + b)h$

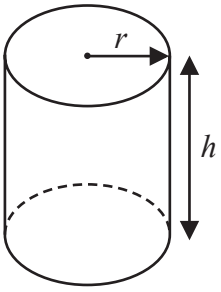


Volume of prism = area of cross section × length



Volume of cylinder = $\pi r^2 h$

Curved surface area of cylinder = $2\pi rh$



DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Answer ALL TWENTY FOUR questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1

6	15	19	28	38	44	48

From the numbers in the box, write down

(a) an odd number

.....

(1)

(b) a multiple of 12

.....

(1)

(c) a prime number

.....

(1)

(d) a factor of 24

.....

(1)

(Total for Question 1 is 4 marks)

2 (a) Write 0.13 as a fraction.

.....

(1)

(b) Write a number in the box to make the statement correct.

$$\frac{16}{20} = \frac{\square}{5}$$

(1)

(Total for Question 2 is 2 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

3 (a) Write a number in the box to make the statement correct.

5073 ÷ ☐ = 19

(1)

(b) Write a number in the box to make the statement correct.

The cube root of ☐ is 14

(1)

Here is a list of numbers.

973 987 393 151 139

(c) Work out the difference between the largest number in the list and the smallest number in the list.

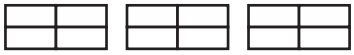
.....

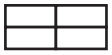
(2)

(Total for Question 3 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

4 The pictogram shows information about the numbers of different breeds of dog that Lucy saw in the park.

Labrador	
Retriever	
Cockapoo	
Bulldog	
Spaniel	
Terrier	

Key:  represents 8 dogs

(a) How many Retrievers did Lucy see in the park?

.....

(1)

Lucy saw 10 Spaniels in the park.

(b) Show this information on the pictogram.

(1)

Lucy saw more Cockapoos than Bulldogs in the park.

(c) How many more?

.....

(1)

(Total for Question 4 is 3 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

5 The table gives the average January temperatures for five cities.

City	Temperature
Yinchuan	–8°C
Mumbai	24°C
Tallinn	–3°C
Valencia	12°C
Saskatoon	–14°C

Here are the temperatures in °C

–8 24 –3 12 –14

(a) Write these numbers in order of size.
Start with the smallest number.

.....

(1)

(b) Work out the difference between the January temperature in Yinchuan and the January temperature in Valencia.

..... °C

(1)

The January temperature in Winnipeg is 13°C lower than the January temperature in Tallinn.

(c) Work out the January temperature in Winnipeg.

..... °C

(1)

The January temperature in Austin is 25°C higher than the January temperature in Saskatoon.

(d) Work out the January temperature in Austin.

..... °C

(1)

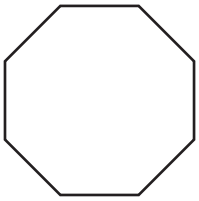
(Total for Question 5 is 4 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

6 The diagram shows a regular octagon.

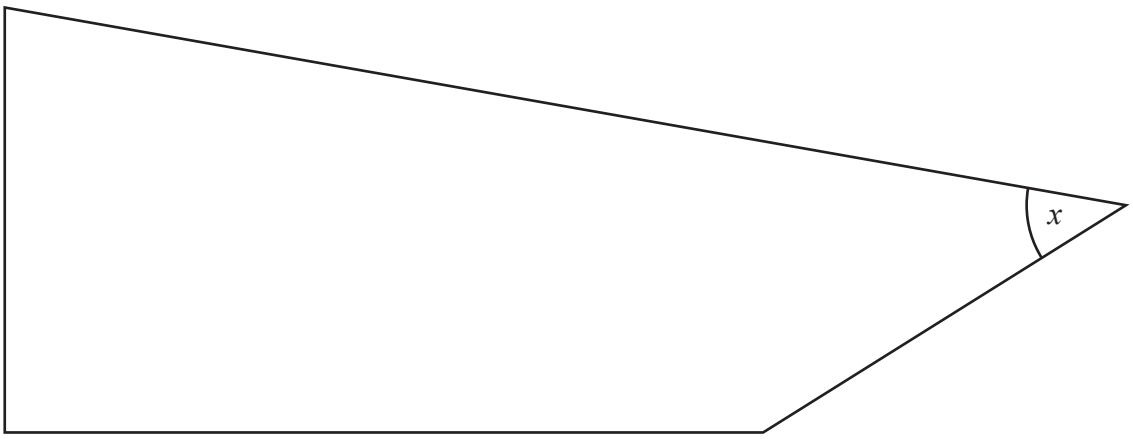


(a) Write down the number of lines of symmetry of a regular octagon.

.....

(1)

Here is a shape.



(b) On the shape, mark with a letter *R* a right angle.

(1)

(c) On the shape, mark with a letter *O* an obtuse angle.

(1)

(d) Find, by measuring, the size of the angle marked *x*

..... °

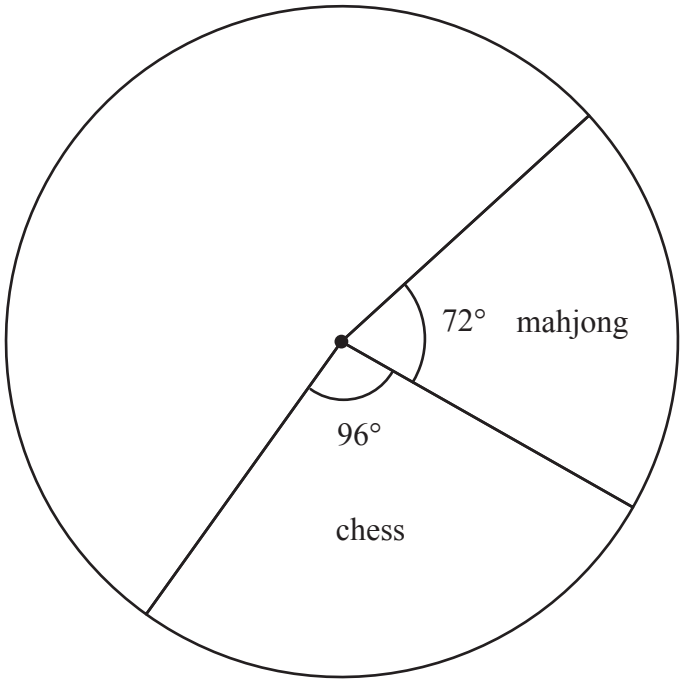
(1)

(Total for Question 6 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

7 At a games club, people played chess or mahjong or rummy or whist.
Each person played only one of these games.

Helena starts to draw a pie chart to show information about the games played.



24 people played mahjong.

(a) Work out the number of people who played chess.

.....

(2)

40 people played whist.

(b) Work out the size of the angle on the pie chart for the sector representing whist.
You do not need to complete the pie chart.

..... °

(2)

(Total for Question 7 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

8 Marie buys

3 birthday cards at $1.80 each
4 sheets of wrapping paper at $1.20 a sheet
2 identical rolls of sticky tape

The total cost is $17.10

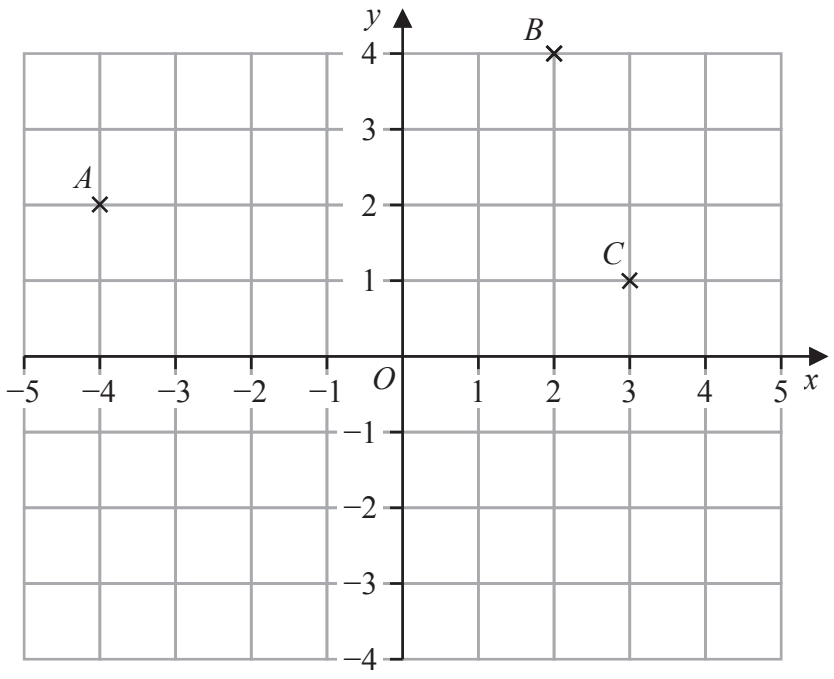
Work out the cost of one roll of sticky tape.

$.....

(Total for Question 8 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

9 The diagram shows three points, A, B and C, marked on a grid.



(a) Write down the coordinates of A

(..... , ...)

(1)

(b) Find the coordinates of the midpoint of AB

(..... , ...)

(2)

D is the point on the grid so that $ABCD$ is a rectangle.

(c) Find the coordinates of D

(..... , ...)

(2)

(Total for Question 9 is 5 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

10 Charlene is comparing cooking temperatures in degrees Celsius (°C) with cooking temperatures in degrees Fahrenheit (°F)

She finds this rule to change from °C to °F

(a) Change a temperature of 175°C to a temperature in °F

.....°F

(2)

(b) Change a temperature of 482°F to a temperature in °C

.....°C

(2)

(Total for Question 10 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

11 (a) Simplify $c + c + c + c + c$

.....

(1)

(b) Simplify $7w + 10y - 9w + 2y$

.....

(2)

The nth term of a sequence is given by $7n - 4$

(c) Find the 1st term and the 5th term of the sequence.

1st term .....

5th term .....

(2)

(d) Solve $7(x + 5) = 8 - 3x$
Show clear algebraic working.

$x =$ .....

(3)

(Total for Question 11 is 8 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

12

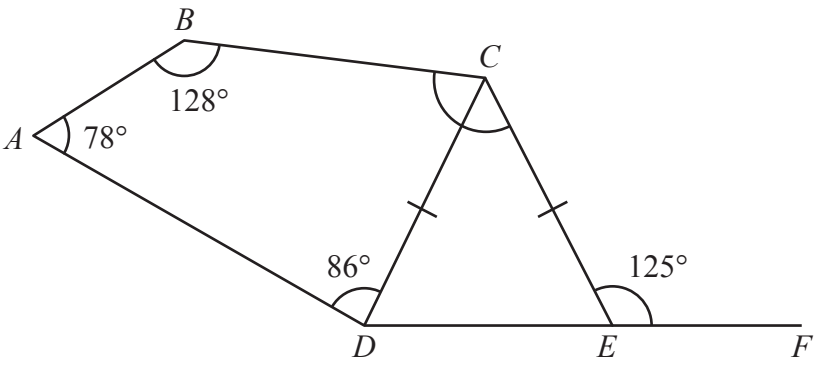


Diagram **NOT** accurately drawn

ABCD is a quadrilateral.
CDE is an isosceles triangle with *CD* = *CE*
DEF is a straight line.

Work out the size of angle *BCE*
Give a reason for each stage of your working.

angle *BCE* = ... °

(Total for Question 12 is 5 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

13 Kye has some toy cars.

He has n red cars.
He has twice as many blue cars as red cars.
He has 7 more green cars than red cars.

(a) Write an expression, in terms of n, for the total number of red cars, blue cars and green cars that Kye has.
Write your answer in its simplest form.

.....

(2)

The total number of cars that Kye has is T

(b) Write an expression, in terms of T and n, for the number of cars that Kye has that are **not** red cars, blue cars or green cars.

.....

(1)

(Total for Question 13 is 3 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

14 Use your calculator to work out the value of

$$\frac{\sqrt{17.8 \times 19.2}}{3.4^2 \times 0.23}$$

Write down all the figures on your calculator display.

.....

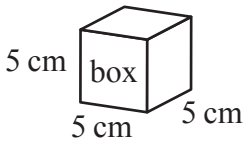
(Total for Question 14 is 2 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

15 The diagram shows a box and a crate with a lid.



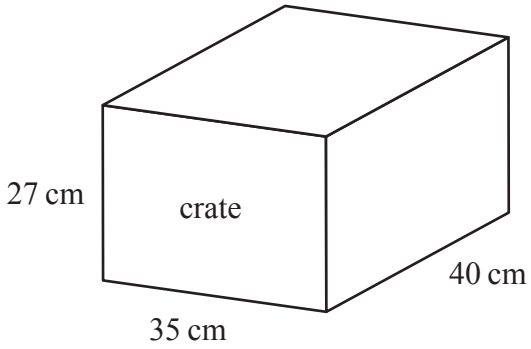


Diagram **NOT** accurately drawn

The box is a cube with sides of length 5 cm.
Tony has many boxes.

The crate is a cuboid with inside lengths of 27 cm, 35 cm and 40 cm.

Tony puts as many boxes as possible into the crate so that the lid will shut.

Work out the volume of space in the crate that is not filled up with boxes.

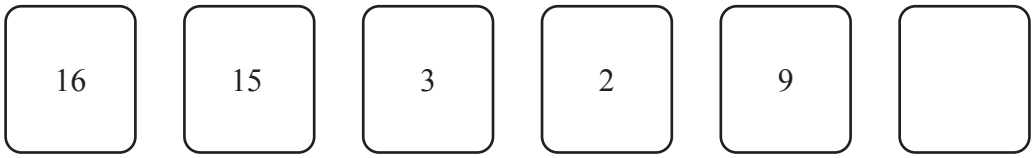
..... cm^3

(Total for Question 15 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

16 Here are six cards.

Five of the cards have a number written on them.



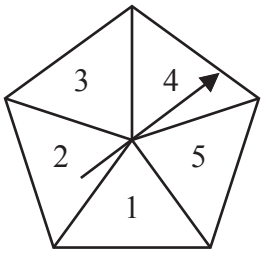
Work out the number that should be written on the last card so that the mean of the six numbers will be 11

.....

(Total for Question 16 is 3 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

17 Here is a biased spinner.



The table gives information about the probability that, when the spinner is spun once, it will land on each number.

Number	1	2	3	4	5
Probability	$2x$	0.27	0.04	x	0.12

Alexis is going to spin the spinner 400 times.

Work out an estimate for the number of times the spinner will land on an odd number.

.....

(Total for Question 17 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

18 Norberto sells white loaves of bread and brown loaves of bread.

He sells a total of 200 loaves such that

the number of white loaves sold : the number of brown loaves sold = 3 : 2

Norberto sells the white loaves for £1.50 each.
He sells the brown loaves for £1.75 each.

40% of the price of a white loaf is profit.
60% of the price of a brown loaf is profit.

Work out Norberto's total profit when he sells all 200 loaves.

£.....

(Total for Question 18 is 5 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

19 Show that $2\frac{1}{3} \div 5\frac{1}{4} = \frac{4}{9}$

(Total for Question 19 is 3 marks)

20 Slavomir invests 5200 euros in a savings account for 4 years.
He gets 2.5% per year compound interest.

Work out how much money Slavomir will have in the savings account at the end of 4 years.
Give your answer correct to the nearest euro.

..... euros

(Total for Question 20 is 3 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

21 The diagram shows a solid wooden cylinder.

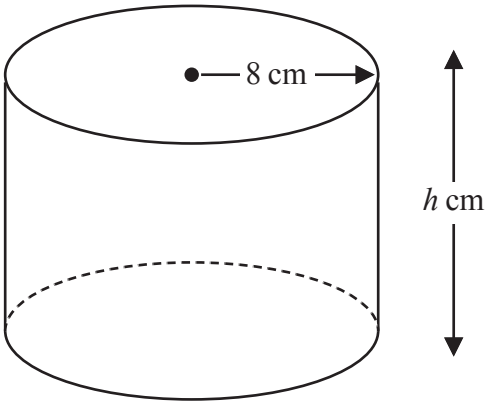


Diagram **NOT** accurately drawn

The cylinder has radius 8 cm and height h cm.
The volume of the cylinder is 1208 cm^3

(a) Work out the value of h
Give your answer correct to the nearest whole number.

$h =$ .....

(2)

The density of the wood is 1.25 g/cm^3

(b) Work out the mass of the cylinder.
Give your answer in kilograms.

..... kilograms

(2)

(Total for Question 21 is 4 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

22 (a) Simplify $g^9 \div g^2$

.....

(1)

(b) Expand $5k^2(k^3 + 4)$

.....

(2)

(c) (i) Factorise $x^2 - 2x - 63$

.....

(2)

(ii) Hence, solve $x^2 - 2x - 63 = 0$

.....

(1)

(d) Solve the inequality $7 - 2y < 3y - 12$

.....

(3)

(Total for Question 22 is 9 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

23 The diagram shows a trapezium, *ABCD*

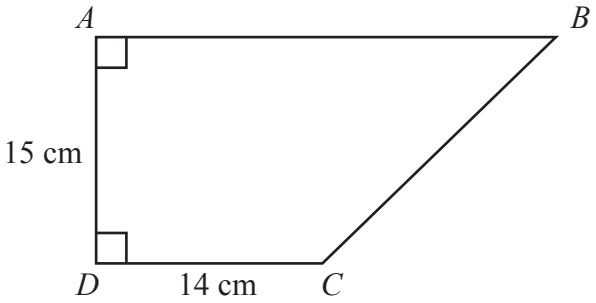


Diagram **NOT** accurately drawn

DAB and *ADC* are right angles.

AD = 15 cm *DC* = 14 cm

The area of the trapezium is 360 cm²

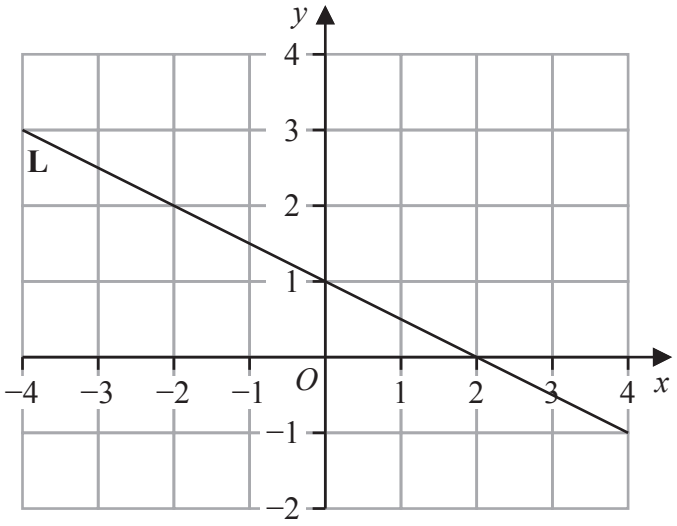
Work out the perimeter of the trapezium.

..... cm

(Total for Question 23 is 6 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

24 Line **L** is drawn on the grid.



Find an equation for **L**
Give your answer in the form $y = mx + c$

.....

(Total for Question 24 is 3 marks)

TOTAL FOR PAPER IS 100 MARKS

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA