Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel International GCSE

Friday 8 November 2024

Morning (Time: 2 hours)

Paper reference **4MA1/2F**

Mathematics A

PAPER 2F
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 ▶

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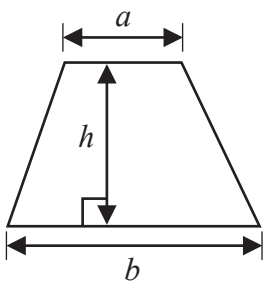
P 7 5 9 3 5 A 0 1 2 4

Pearson

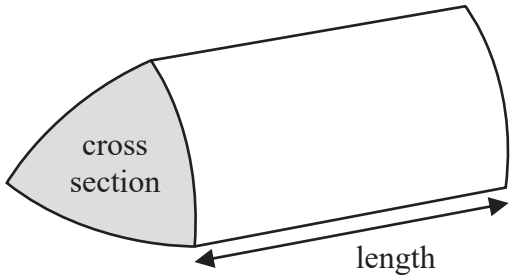
International GCSE Mathematics

Formulae sheet – Foundation Tier

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

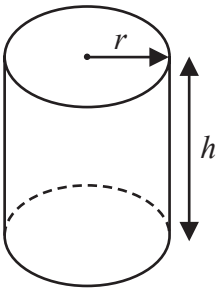


Volume of prism = area of cross section × length



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

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



Answer ALL TWENTY SEVEN questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 (a) Write the number 7823 correct to the nearest hundred.

.....

(1)

(b) Write a number in each box so that each calculation is correct.

(i) $0.4 \times$ ☐ $= 4000$

(1)

(ii) $3600 \div$ ☐ $= 3.6$

(1)

(c) Write down four factors of 18

.....

(1)

(d) Which one of the following numbers is a prime number?

6 12 17 22 27

.....

(1)

(Total for Question 1 is 5 marks)

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

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

11 15 19 23 27

(a) (i) Write down the next term of the sequence.

.....

(1)

(ii) Explain how you found your answer to part (a)(i)

.....

(1)

The 14th term of the sequence is 63

(b) Find the sum of the 16th term and the 17th term of the sequence.

.....

(2)

Felix says that 98 is a term of the sequence.
Felix is wrong.

(c) Explain why Felix is wrong.

.....

.....

(1)

(Total for Question 2 is 5 marks)

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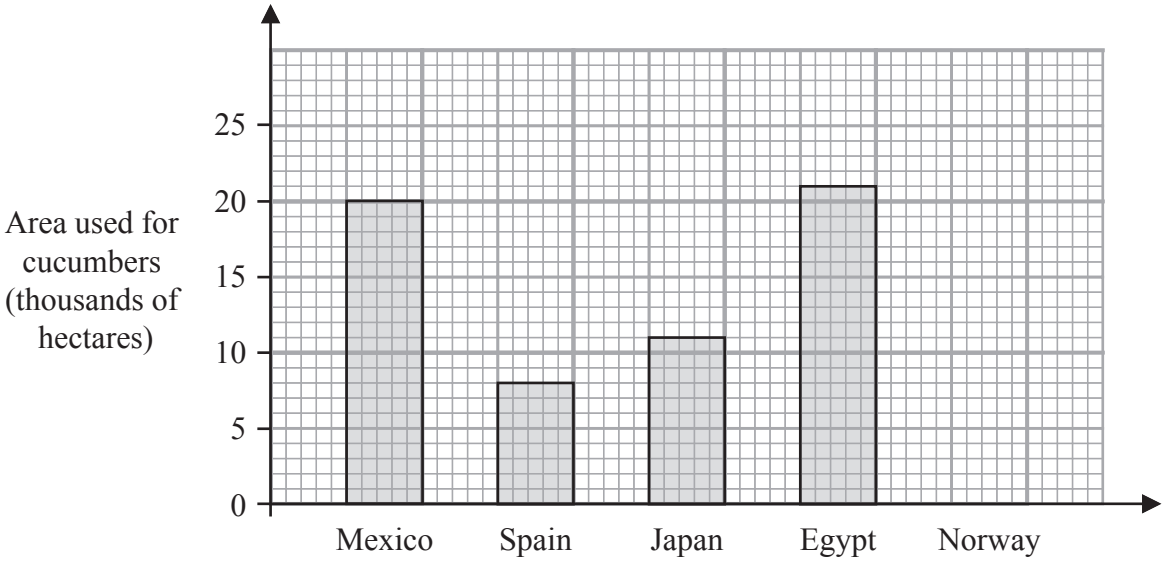
3 The bar chart shows information about the area, in thousands of hectares, that was used to grow cucumbers in each of four countries in 2021



(a) Write down the number of hectares that were used to grow cucumbers in Egypt.

..... thousand

(1)

More hectares were used to grow cucumbers in Mexico than in Spain.

(b) How many more?

..... thousand

(1)

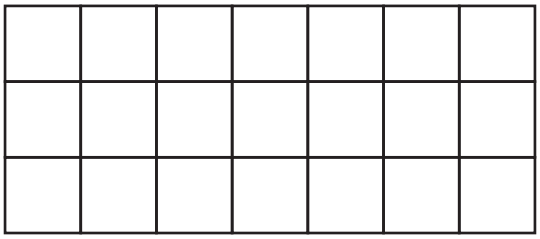
In Norway, 17 thousand hectares were used to grow cucumbers.

(c) Show this information on the bar chart.

(1)

(Total for Question 3 is 3 marks)

4 Here is a rectangle made of squares.



(a) Shade $\frac{3}{7}$ of the rectangle.

(1)

Here are five fractions.

$$\frac{33}{43} \quad \frac{18}{24} \quad \frac{16}{20} \quad \frac{21}{27} \quad \frac{12}{16}$$

(b) Write down the two fractions that are equivalent to $\frac{3}{4}$

..... and .....

(2)

(c) Write $\frac{24}{7}$ as a mixed number.

.....

(1)

(d) Write $\frac{9}{10}$ as a percentage.

..... %

(1)

There are 80 crayons in a box.

$\frac{2}{5}$ of the crayons are red.

(e) Work out the number of crayons that are **not** red.

.....

(2)

(Total for Question 4 is 7 marks)

5 The table shows information about the shoe sizes of the 25 children in a nursery class.

Shoe size	Frequency
18	2
19	4
20	5
21	6
22	8

Find the median shoe size.

.....

(Total for Question 5 is 2 marks)

6 Plates cost \$14 each.
Ben has \$250 to spend.

Ben buys as many plates as he can.

How much of the \$250 does he have left?

\$.....

(Total for Question 6 is 3 marks)

7 One weekend, Marion went on four walks.

Here are the distances Marion walked

3.5	kilometres
950	metres
1.8	kilometres
1200	metres

The same weekend, Talha walked a total of 8 kilometres.

Talha walked a greater distance than Marion walked.

How much greater?
Give your answer in metres.

..... metres

(Total for Question 7 is 4 marks)

8 (a) Simplify $7g + 3h + 4g - 5h$

.....

(2)

(b) Simplify $7a \times 4m$

.....

(1)

(c) Solve $5x - 7 = 12$

$x =$ .....

(2)

(d) Expand $5(7k + 3)$

.....

(1)

(e) Factorise $9y + 12$

.....

(1)

Max has c counters.
Bulan has 3 times as many counters as Max.
Chanda has 7 more counters than Max.

(f) Write an expression, in terms of c, for the total number of counters that Max, Bulan and Chanda have.
Simplify your answer.

.....

(3)

(Total for Question 8 is 10 marks)

9 Don got on a bus at 07 35

He got off the bus at 13 25

How long was Don on the bus?
Give your answer in hours and minutes.

..... hours ..... minutes

(Total for Question 9 is 2 marks)

10 Here is a cuboid.

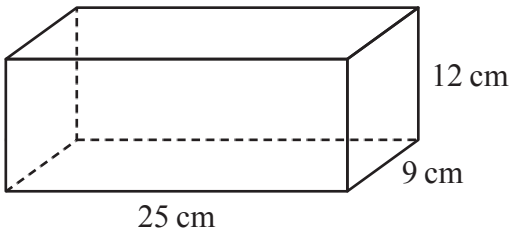


Diagram **NOT** accurately drawn

Work out the volume of the cuboid.

..... cm^3

(Total for Question 10 is 2 marks)

11

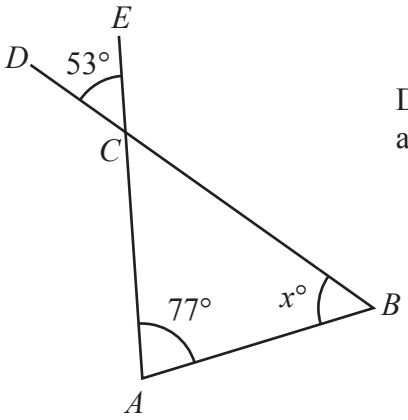


Diagram **NOT** accurately drawn

ABC is a triangle.
BCD and *ACE* are straight lines.

Work out the value of x

$x =$ .....

(Total for Question 11 is 2 marks)

12 In an orchard, there are 240 fruit trees.
There are only apple trees and pear trees such that

number of apple trees : number of pear trees = 5 : 3

64% of the apple trees produce cooking apples.

Work out the number of apple trees that produce cooking apples.

.....

(Total for Question 12 is 4 marks)

13 (a) Use your calculator to work out the value of $\frac{7.93 - 2.34^2}{0.14}$

Give your answer as a decimal.
Write down all the figures on your calculator display.

.....

(2)

(b) Write your answer to part (a) correct to one decimal place.

.....

(1)

(Total for Question 13 is 3 marks)

14 The diagram shows a shape *ABCDE* made from a square *ABDE* and an isosceles triangle *BCD*

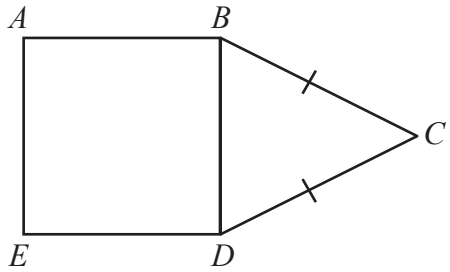


Diagram **NOT** accurately drawn

BC = *DC*

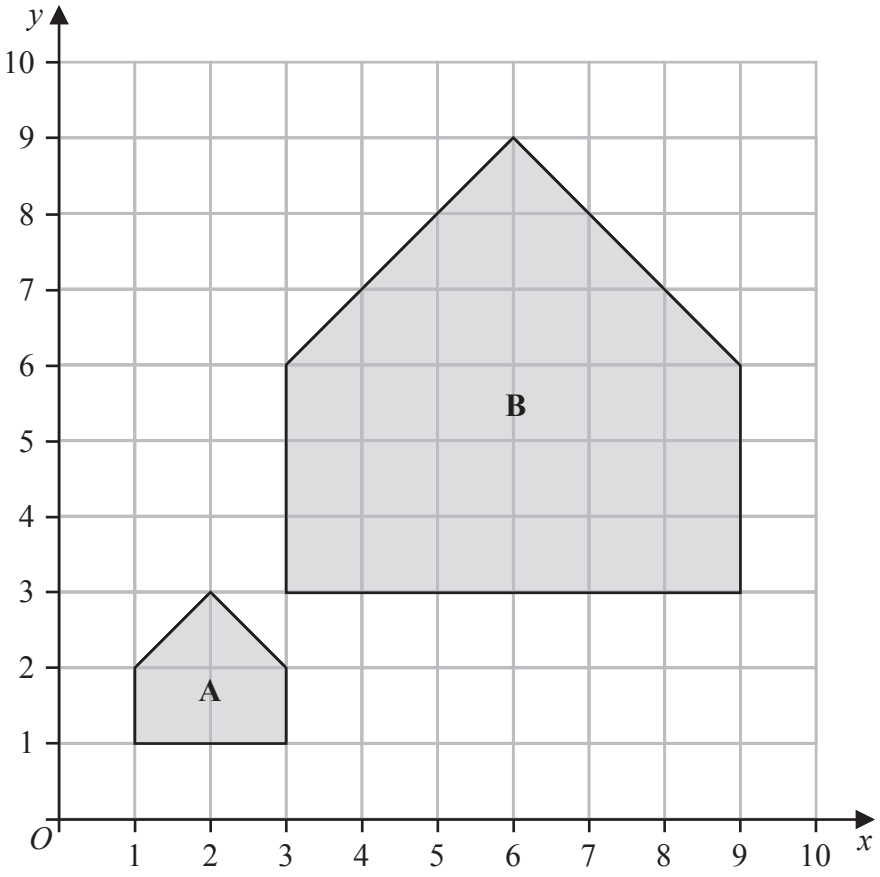
The area of square *ABDE* is 49 cm^2
The perimeter of triangle *BCD* is 27 cm

Work out the perimeter of *ABCDE*

..... cm

(Total for Question 14 is 3 marks)

15



Describe fully the single transformation that maps shape **A** onto shape **B**

.....

.....

(Total for Question 15 is 3 marks)

16 A circle has radius 9 cm

Work out the area of the circle.
Give your answer correct to 3 significant figures.

..... cm^2

(Total for Question 16 is 2 marks)

17 Show that $1\frac{5}{7} \times 2\frac{3}{16} = 3\frac{3}{4}$

(Total for Question 17 is 3 marks)

18 The length of a table is measured as 1.4 metres correct to one decimal place.

(a) Write down the upper bound of the length of the table.

..... metres

(1)

(b) Write down the lower bound of the length of the table.

..... metres

(1)

(Total for Question 18 is 2 marks)

19 The diagram shows triangle PQR

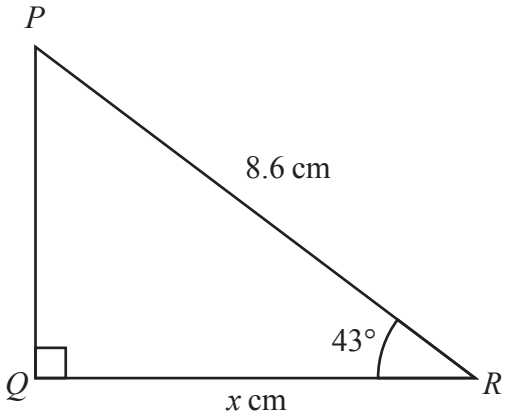


Diagram **NOT** accurately drawn

Work out the value of x
Give your answer correct to one decimal place.

$x =$ .....

(Total for Question 19 is 3 marks)

20 N is a number.
17% of N is 357

(a) Work out the value of N

$N =$ .....

(2)

In 2019, the population of a village was 650
In 2020, the population of the village was 806

(b) Work out the percentage increase in the population.

..... %

(3)

(Total for Question 20 is 5 marks)

21 Cody has a biased 5-sided spinner, numbered 1, 2, 3, 4, 5

The table gives the probabilities that when the spinner is spun it will land on 2 or on 3 or on 5

Number	1	2	3	4	5
Probability		0.14	0.17		0.21

The probability that the spinner will land on 1 is the same as the probability that the spinner will land on 4

Cody is going to spin the spinner 400 times.

Work out an estimate for the number of times the spinner will land on 4

.....

(Total for Question 21 is 4 marks)

22 The diagram shows a solid triangular prism.

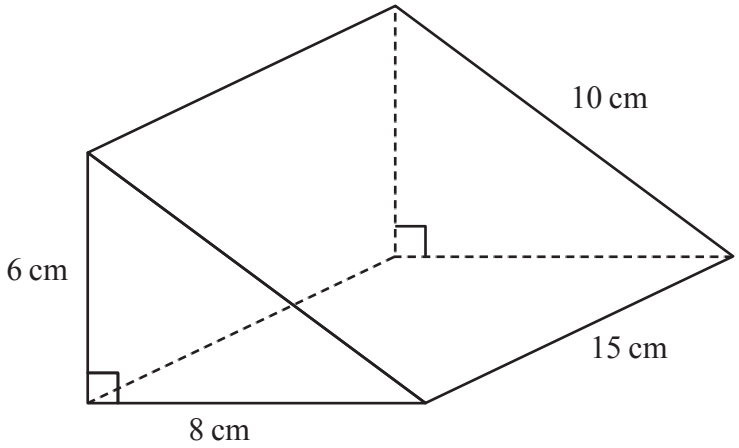


Diagram **NOT** accurately drawn

Work out the **total** surface area of the triangular prism.

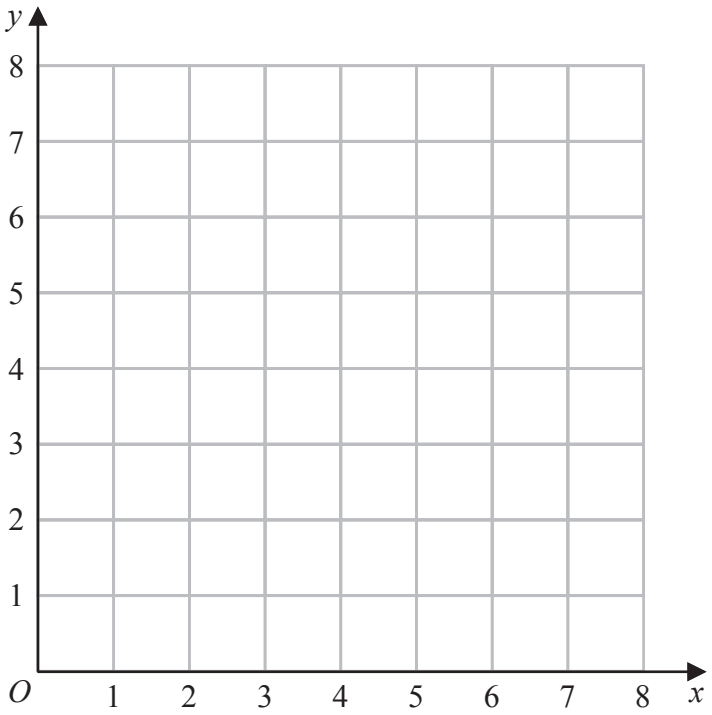
..... cm^2

(Total for Question 22 is 3 marks)

23 (a) On the grid, draw the straight line with equation

(i) $x = 3$ (ii) $y = 1$ (iii) $x + y = 7$

Label each line with its equation.



(3)

(b) Show, by shading on the grid, the region that satisfies all three of the inequalities

$x \geqslant 3$ $y \geqslant 1$ $x + y \leqslant 7$

Label the region **R**

(1)

(Total for Question 23 is 4 marks)

24 Kim puts 4 bananas in a bag.
The mean weight of the 4 bananas in the bag is 145 grams.

Andy puts one more banana into the bag.
The mean weight of the 5 bananas in the bag is 142 grams.

Work out the weight of the banana that Andy puts into the bag.

..... grams

(Total for Question 24 is 3 marks)

25 Nisha invests 20 000 euros for 3 years in a savings account.
She gets 3.5% per year compound interest.

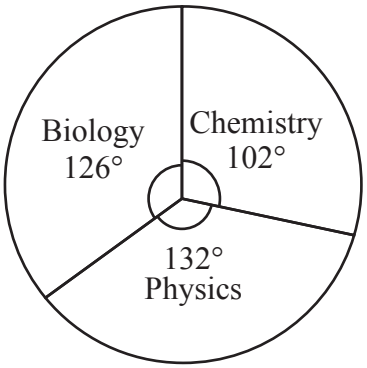
Work out how much money Nisha will have in her savings account at the end of the 3 years.
Give your answer correct to the nearest euro.

..... euros

(Total for Question 25 is 3 marks)

26 All the students in year 10 and all the students in year 11 named their favourite science subject from Biology, Chemistry and Physics.

The pie chart shows information about the results for the year 10 students.
The table shows information about the results for the year 11 students.



Pie chart for year 10

science subject	number of students
Biology	$3x + 6$
Chemistry	$5x + 8$
Physics	$7x - 9$

Table for year 11

There are 300 students in year 10
There are 320 students in year 11

More students in year 10 than in year 11 said Biology was their favourite science subject.

How many more?

(Total for Question 26 is 5 marks)

Turn over for Question 27

27

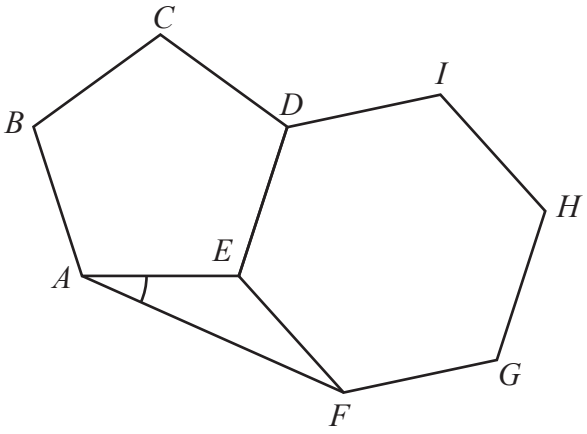


Diagram **NOT** accurately drawn

ABCDE is a regular pentagon.
DEFGHI is a regular hexagon.

AF is a straight line.

Work out the size of angle *EAF*

.....°

(Total for Question 27 is 5 marks)

TOTAL FOR PAPER IS 100 MARKS