Write your name here

Surname	Other names

Pearson Edexcel
International GCSE

Centre Number | | | | | |

Candidate Number | | | | |

Mathematics A

Level 1/2
Paper 2FR



Foundation Tier

Thursday 7 June 2018 – Morning
Time: 2 hours

Paper Reference
4MA1/2FR

You must have:
Ruler graduated in centimetres and millimetres, protractor, 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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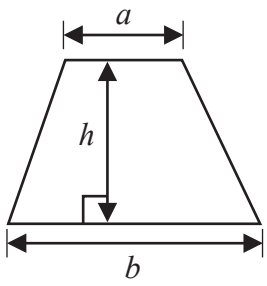
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Pearson

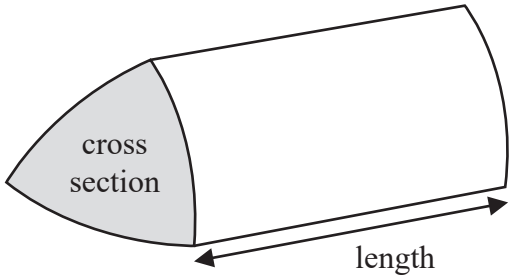
International GCSE Mathematics

Formulae sheet – Foundation Tier

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

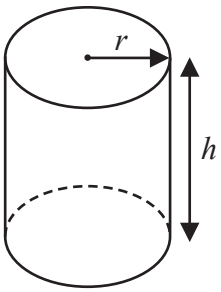


Volume of prism = area of cross section × length



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

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



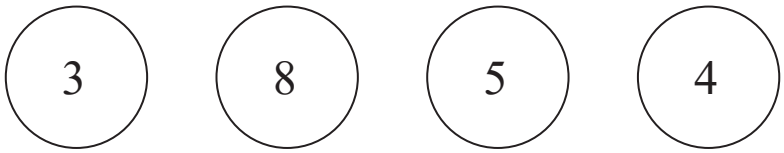
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Answer ALL TWENTY FIVE questions.

Write your answers in the spaces provided.

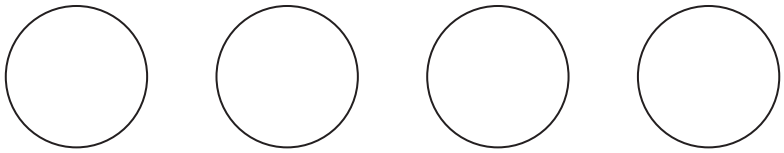
You must write down all the stages in your working.

1 Here are four discs.
Each disc has a number on it.



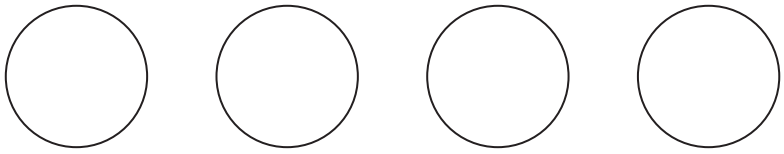
These four discs are arranged to make the number 3854

(a) Arrange the four discs to make the largest possible number.



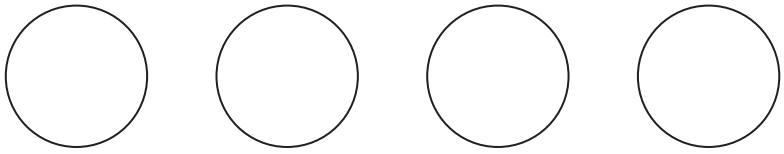
(1)

(b) Arrange the four discs to make a multiple of 5



(1)

(c) Arrange the four discs to make the smallest possible odd number.



(1)

(Total for Question 1 is 3 marks)

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2 (a) Write $\frac{4}{5}$ as a decimal.

.....

(1)

(b) Write $\frac{77}{9}$ as a mixed number.

.....

(1)

(c) Write $\frac{35}{45}$ as a fraction in its simplest form.

.....

(1)

(d) Write these decimals in order of size.

4.81 4.013 4.85 4.807 4.02

Start with the smallest decimal.

.....

(1)

(e) Find the sum of $\frac{13}{20}$ and 0.72

Give your answer as a decimal.

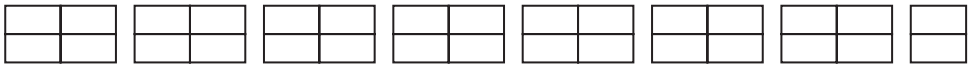
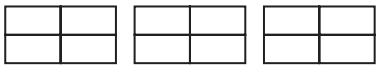
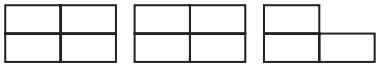
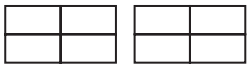
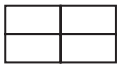
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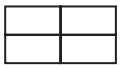
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(Total for Question 2 is 6 marks)

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3 The pictogram shows information about the total weight of bananas grown last year in each of five countries.

India	
China	
Uganda	
Brazil	
Tanzania	
Indonesia	

 represents 4 million tonnes of bananas

(a) How many million tonnes of bananas were grown last year in Uganda?

.....million tonnes

(1)

Last year the weight of bananas grown in India was more than the weight of bananas grown in China.

(b) How many million tonnes more?

.....million tonnes

(1)

Last year the total weight of bananas grown in Indonesia was 6 million tonnes.

(c) Show this information on the pictogram.

(1)

(Total for Question 3 is 3 marks)

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4 (a) Write 0.4 as a percentage.

.....%

(1)

(b) What is 42 out of 80 as a percentage?

.....%

(2)

(c) Work out 72% of 350 cm.

.....cm

(2)

(Total for Question 4 is 5 marks)

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5 Valentino sells ice cream cones and ice cream tubs.
The ice cream flavours are chocolate, strawberry and vanilla.

On Sunday, 120 people each bought one ice cream from Valentino.
The two-way table shows some information about these ice creams.

	chocolate	**strawberry**	**vanilla**	Total
cone	16		22	78
tub		14		
Total	23			120

(a) Complete the two-way table.

(3)

One of the 120 people is picked at random.

(b) Find the probability that this person bought a vanilla ice cream cone.

.....

(2)

(Total for Question 5 is 5 marks)

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6 (a) Write 1782 correct to the nearest hundred.

.....

(1)

(b) Write the number thirty two thousand and forty five in figures.

.....

(1)

Billy works out the answer to $2 + 5 \times 7$
He says that the answer is 49

Billy is not correct as the answer should be 37

(c) Explain what Billy has done wrong.

.....

.....

(1)

Chen says,

"A prime number added to an even number always gives an odd number."

(d) Give an example to show that Chen is not correct.

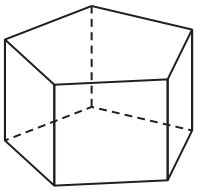
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(1)

(Total for Question 6 is 4 marks)

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7 The diagram shows a 3-D shape.



(a) Write down the mathematical name of the shape.

.....

(1)

(b) How many faces has the shape?

.....

(1)

(c) How many edges has the shape?

.....

(1)

(Total for Question 7 is 3 marks)

8 Giovanni arrived at a railway station in Venice at 06 45

(a) Write this time using the 12-hour clock.

.....

(1)

Giovanni caught a train from Venice to Rome.
The train left Venice at 07 25 and arrived in Rome at 11 10 the same day.

(b) Work out how long the train journey took.
Give your answer in hours and minutes.

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

(2)

(Total for Question 8 is 3 marks)

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9 The table shows information about the number of goals scored by a football team in each of 20 matches.

Number of goals scored	Frequency
0	6
1	5
2	7
3	1
4	0
5	1

(a) Write down the mode of the number of goals scored.

.....

(1)

(b) Find the median number of goals scored.

.....

(2)

(c) Work out the total number of goals scored.

.....

(2)

(Total for Question 9 is 5 marks)

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10 3 kg of carrots cost £1.35
5 kg of carrots and 2 kg of potatoes cost a total of £4.15

Find the cost of 1 kg of potatoes.

£.....

(Total for Question 10 is 3 marks)

11 (a) Find the cube root of 421.875

.....

(1)

(b) (i) Work out the value of $\dfrac{7.61^2}{5.2 \times 3.5}$

Write down all the figures on your calculator display.

.....

(2)

(ii) Write your answer to part (b)(i) correct to 2 significant figures.

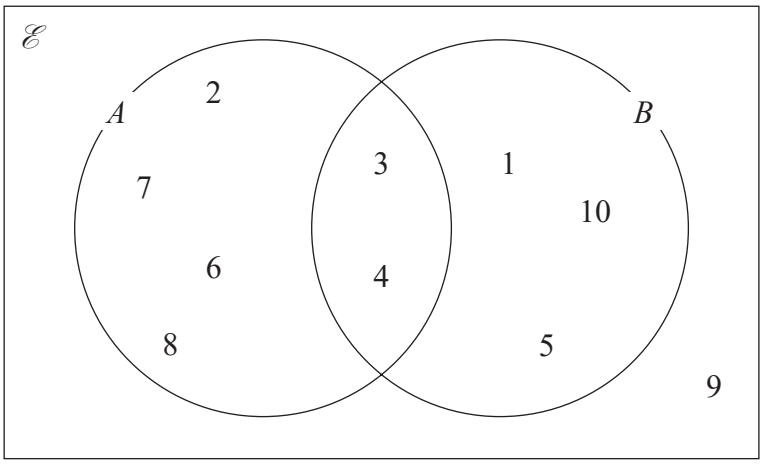
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(1)

(Total for Question 11 is 4 marks)

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12 The Venn diagram shows the numbers in the universal set, $\mathscr{E}$, and two sets A and B.



(a) List the members of the set

(i) A

.....

(ii) $A \cap B$

.....

(iii) A'

.....

(3)

A number is picked at random from the universal set.

(b) Find the probability that this number is in set B but not in set A.

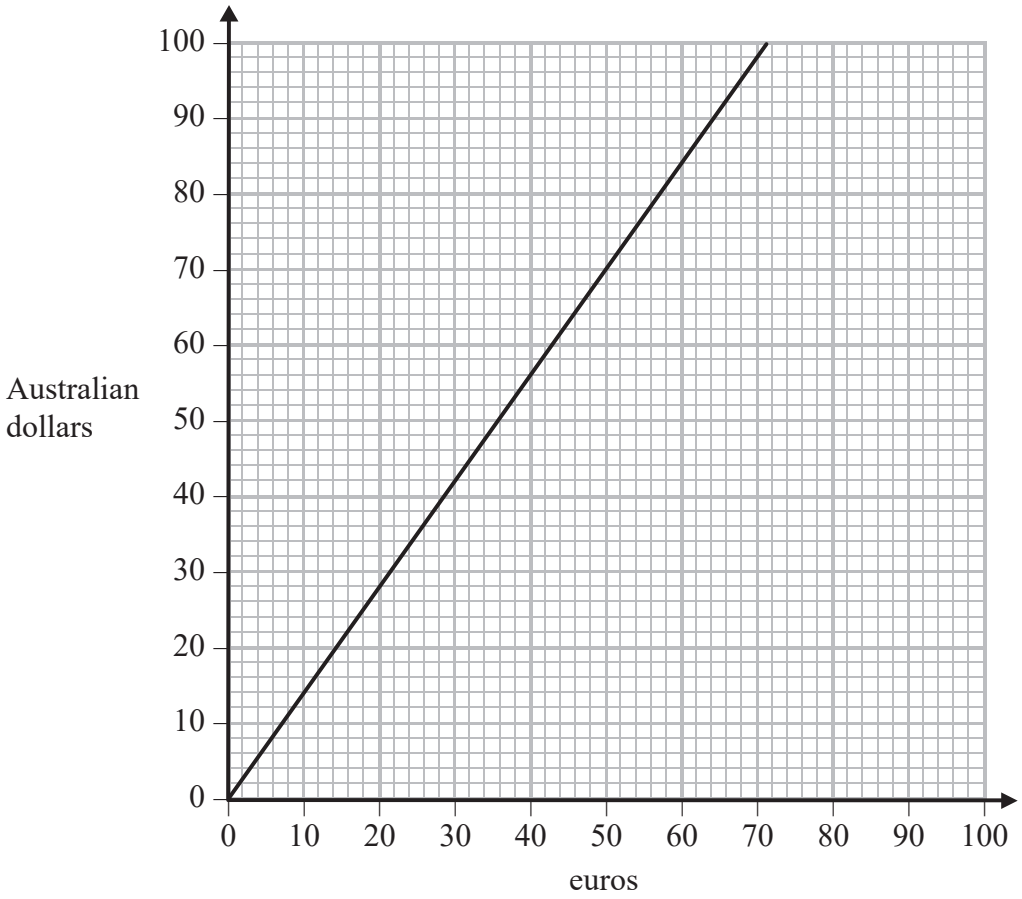
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(2)

(Total for Question 12 is 5 marks)

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13 Here is a conversion graph to change between euros and Australian dollars.



(a) Use the graph to change

(i) 50 euros to Australian dollars,

.....Australian dollars

(ii) 90 Australian dollars to euros.

.....euros

(2)

Sheila is on holiday in Italy and is going to the United Arab Emirates.
She knows that

1 Australian dollar = 2.7 dirhams

(b) Change 500 euros to dirhams.

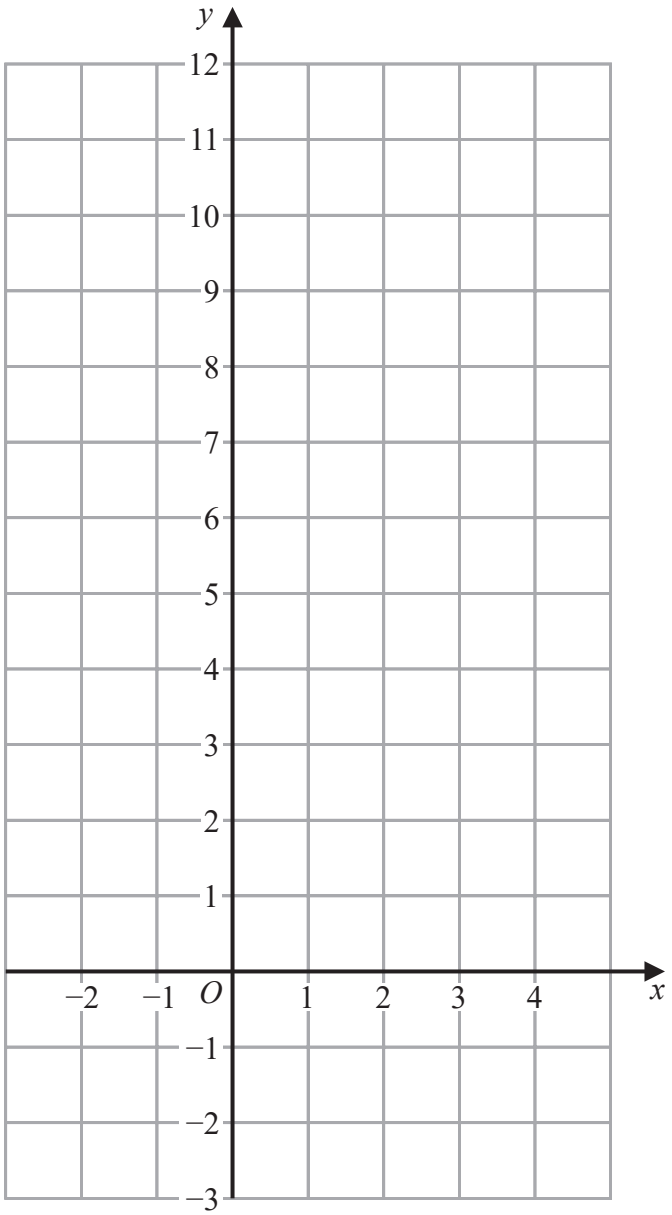
.....dirhams

(3)

(Total for Question 13 is 5 marks)

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14 On the grid, draw the graph of $y = 2x + 3$ for values of x from -2 to 4



(Total for Question 14 is 3 marks)

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15 (a) Solve $8 - 2p = 15$

$p =$ .....

(2)

(b) Solve $\dfrac{7x - 2}{4} = 3x + 1$

Show clear algebraic working.

$x =$ .....

(3)

(Total for Question 15 is 5 marks)

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16 x, 10 and y are three integers written in order of size, starting with the smallest integer.

The mean of x, 10 and y is 11
The range of x, 10 and y is 7

Work out the value of x and the value of y.

$x =$ .....

$y =$ .....

(Total for Question 16 is 2 marks)

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

17 A box is put on a table.

The face of the box in contact with the table is in the shape of a rectangle, 2 m by 1.25 m.
The pressure on the table due to the box is 42 newtons/m^2

Work out the force exerted by the box on the table.

..... newtons

(Total for Question 17 is 3 marks)

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18 Behnaz makes candles.

She has 6.3 kilograms of wax and uses it all to make candles.
Each candle Behnaz makes uses 210 grams of wax.

Behnaz sells $\frac{2}{5}$ of the candles for \$13 each.

She then reduces this price by 20% and sells the rest of the candles.

Work out the total amount of money Behnaz gets by selling all the candles she made.

\$.....

(Total for Question 18 is 4 marks)

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19 (a) Expand and simplify $3(c - 7) + 2(3c + 4)$

.....

(2)

(b) Expand and simplify $(x + 7)(x - 2)$

.....

(2)

(c) Factorise fully $28y^2 - 21y$

.....

(2)

(Total for Question 19 is 6 marks)

20 Abelie flew by plane from Dubai to Rome.

The flight time was 6 hours 42 minutes.
The average speed of the plane was 650 kilometres per hour.

Work out the distance the plane flew.

..... kilometres

(Total for Question 20 is 3 marks)

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21 (a) Simplify $g^7 \times g^3$

.....

(1)

(b) Simplify $(k^3)^5$

.....

(1)

(c) Simplify fully $\dfrac{20x^2y^6}{4x^2y^2}$

.....

(2)

(d) Make e the subject of the formula $h = 3e + f$

.....

(2)

(Total for Question 21 is 6 marks)

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22 Hiran invests 20 000 rupees in an account for 3 years at 1.5% per year compound interest.

Work out the total amount of money in the account at the end of 3 years.
Give your answer to the nearest rupee.

.....rupees

(Total for Question 22 is 3 marks)

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23 From point A, Stanley walks 200 m due east to point B.
From B, he then walks 160 m due south to point C.

Work out the length of AC.
Give your answer correct to 3 significant figures.

.....metres

(Total for Question 23 is 3 marks)

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24

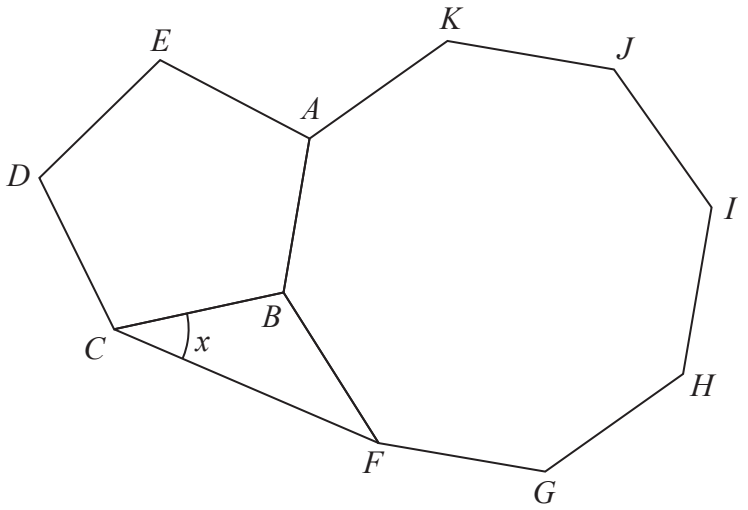


Diagram **NOT** accurately drawn

The diagram shows a regular pentagon, *ABCDE*, a regular octagon, *ABFGHIJK*, and an isosceles triangle, *BCF*.

Work out the size of angle *x*.

.....°

(Total for Question 24 is 4 marks)

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25 *ABCD* is a trapezium.

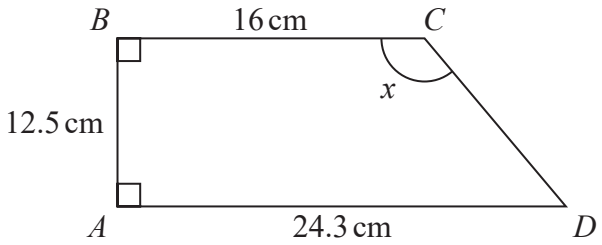


Diagram **NOT** accurately drawn

Work out the size of angle x.
Give your answer correct to 1 decimal place.

.....°

(Total for Question 25 is 4 marks)

TOTAL FOR PAPER IS 100 MARKS

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