Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number	Candidate Number

Mathematics

FOR FULL VIDEO SOLUTIONS SCAN THE QR CODE

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Foundation Tier

Predicted Paper 1F - 16th May 2024

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.
- 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 where indicated, but not otherwise.**
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Disclaimer: No-one can ever be sure what will definitely appear on the GCSE Maths Papers. I have put this paper together based on common topics we often see on Paper 1. I hope you find it helpful!

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Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

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1 Write $\frac{4}{5}$ as a decimal.

.....

(Total for Question 1 is 1 mark)

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

0.48 0.4 0.045 0.05

.....

(Total for Question 2 is 1 mark)

3 Work out $20 + 6 \div 2$

.....

(Total for Question 3 is 1 mark)

4 Write 5.28 correct to 1 decimal place.

.....

(Total for Question 4 is 1 mark)

5 Write down the value of the 5 in the number 367.58

.....

(Total for Question 5 is 1 mark)

6 Here is a list of numbers.

6 8 15 21 24 29

VIDEO SOLUTIONS

From the list, write down

(a) a factor of 12

.....

(1)

(b) a prime number

.....

(1)

(c) a cube number

.....

(1)

(Total for Question 6 is 3 marks)

7 Jack and Harry are planning a trip to a festival. They will travel together by car.

These are the costs for the trip.

Total cost of petrol	£62
Weekend tickets for the festival	£120 each person
Spending money	£60 each person

Jack and Harry will each pay for themselves.
They plan to save the cost of the festival over the next four months.
How much do they each need to save each month?

£.....

(Total for Question 7 is 4 marks)

8 (a) Expand $x(2x - 3)$

VIDEO SOLUTIONS

.....

(1)

(b) Factorise fully $14m^2 - 21m$

.....

(2)

(c) Solve $2(y + 7) = 11$

$y =$ .....

(2)

(Total for Question 8 is 5 marks)

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9 The pictogram shows information about the number of potatoes sold in a shop on Monday, on Tuesday and on Wednesday.

Monday	
Tuesday	
Wednesday	
Thursday	

Key:

 represents 12 potatoes

Over the four days shown, the shop sold a total of 60 potatoes.

(a) Complete the pictogram for Thursday.

(2)

(b) What percentage of potatoes were sold on Monday?

.....%

(2)

(Total for Question 9 is 4 marks)

10 There are 8 sandwiches in a fridge. The fillings of each sandwich are given below.

cheese cheese ham cheese turkey tuna ham cheese

VIDEO SOLUTIONS

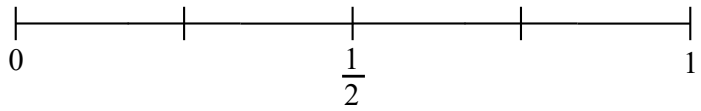
(a) Write down the mode.

.....

(1)

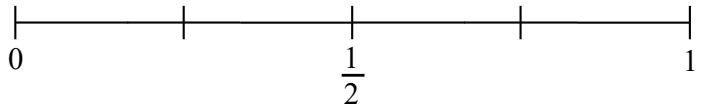
Harry is going to take a sandwich from the fridge at random.

(b) (i) On the probability scale, mark with a cross (×) the probability that he will take a ham sandwich.



(1)

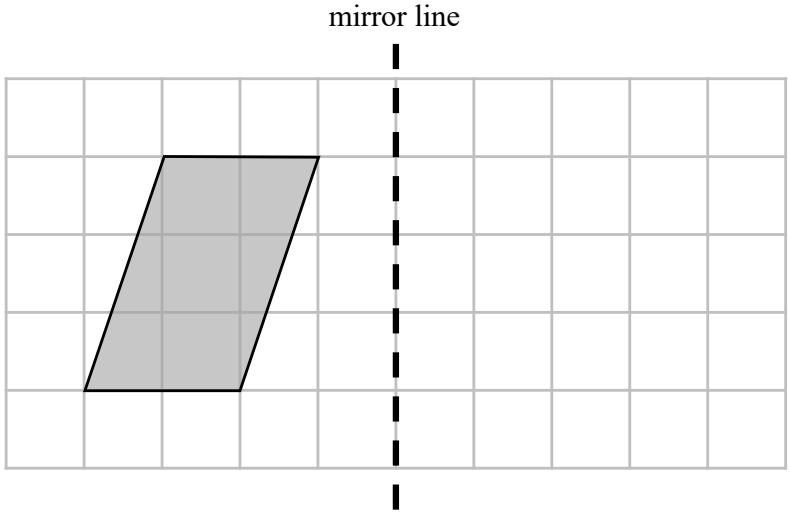
(ii) On the probability scale, mark with a cross (×) the probability that he will take a prawn sandwich.



(1)

(Total for Question 1 is 3 marks)

11

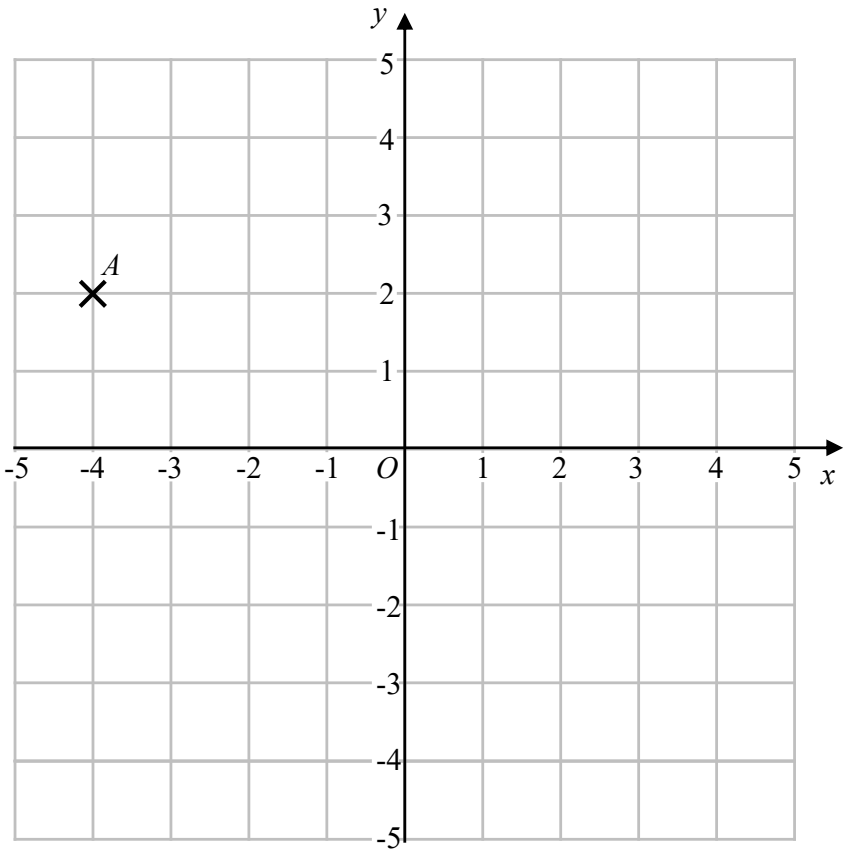


Reflect the shaded shape in the mirror line

(Total for Question 11 is 2 marks)

12

VIDEO SOLUTIONS



(a) Write down the coordinates of the point A.

(..... , ...)

(1)

(b) On the grid, mark with a cross (×) the point (3, -3)
Label this point B

(1)

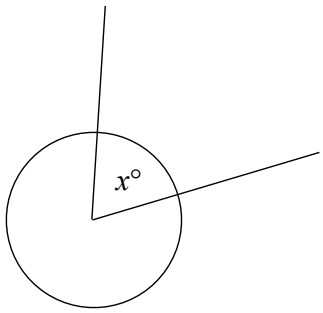
(c) On the grid, draw the line with equation $y = -1$

(1)

(Total for Question 12 is 3 marks)

13

VIDEO SOLUTIONS



$x°$ is $\frac{2}{9}$ of a full turn.

Find the value of x.

.....

(Total for Question 13 is 3 marks)

14 A stall sells large and small glasses of lemonade.

A large glass is 300 ml
A small glass is 175 ml

(a) Laura orders 5 large and 2 small glasses of lemonade.
What is the total amount of lemonade Laura has bought?
Give your answer in litres.

..... litres

(2)

(b) Write the ratio of the amount of lemonade in a large glass to the amount of lemonade in a small glass. Give your answer in its simplest form.

.....

(2)

(Total for Question 14 is 4 marks)

15 Tom is driving 200 miles to collect a new caravan.
Tom leaves home at 6:45 am

It takes him $1\frac{1}{2}$ hours to drive the first 80 miles.

He completes the rest of the journey at an average speed of 40 miles per hour.
At what time does arrive to collect the caravan?

VIDEO SOLUTIONS

.....

(Total for Question 15 is 4 marks)

16 Here are the first five terms of an arithmetic sequence.

2, 7, 12, 17, 22

(a) Find an expression, in terms of n, for the nth term of this sequence.

.....

(2)

(b) Find the 15th term in the sequence

.....

(1)

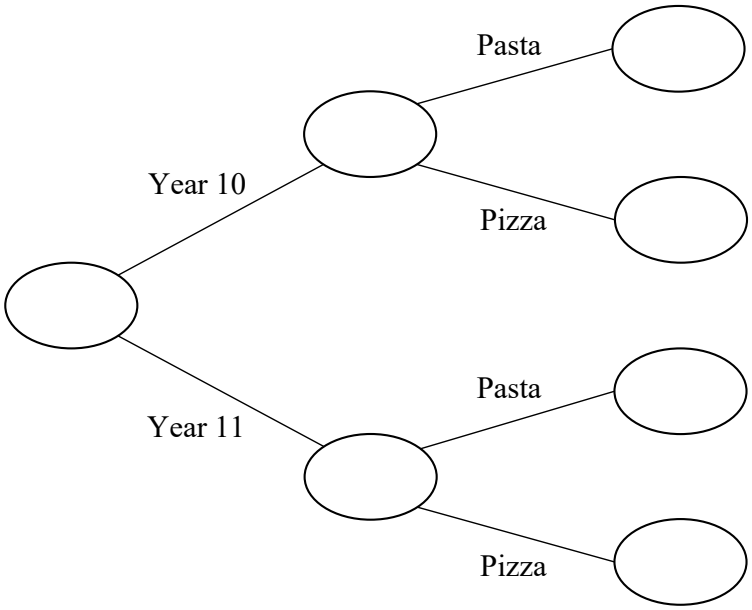
(Total for Question 16 is 3 marks)

17 150 students were asked if they prefer pizza or pasta.

The students were all in Year 10 or Year 11.

80 of the students were Year 10
30% of the students preferred pasta
42 Year 11 students said pizza

(a) Use this information to complete the frequency tree.



(3)

(b) One of the Year 10 students is chosen at random.
Write down the probability that this student preferred pizza.

.....

(2)

(Total for Question 17 is 5 marks)

18 Work out 4.08×3.7

VIDEO SOLUTIONS

.....

(Total for Question 18 is 3 marks)

19 Work out $4 \div 2\frac{2}{3}$

Give your answer as a mixed number in its simplest form.

.....

(Total for Question 19 is 3 marks)

20 (a) Write 72 as a product of its prime factors.
Give your answer in index form.

VIDEO SOLUTIONS

.....

(2)

(b) Find the lowest common multiple (LCM) of 72 and 90

.....

(2)

(Total for Question 20 is 4 marks)

21 Billie, Nicky and Katy share some money.

Billie and Nicky have £240 in the ratio 3:5

The amount of money that Nicky has to the amount of money Katy has is in the ratio 3:2

How much money does Katy have?

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£.....

(Total for Question 21 is 3 marks)

22 There are only pink cubes, grey cubes and white cubes in a box.

The table shows the probability of taking at random a pink cube from the box.

Colour	pink	grey	white
Probability	0.4		

The number of white cubes in the box is three times the number of grey cubes.

Complete the table.

(Total for Question 22 is 2 marks)

23 (a) Write 0.00209 in standard form.

VIDEO SOLUTIONS

.....

(b) Write 1.302×10^4 as an ordinary number.

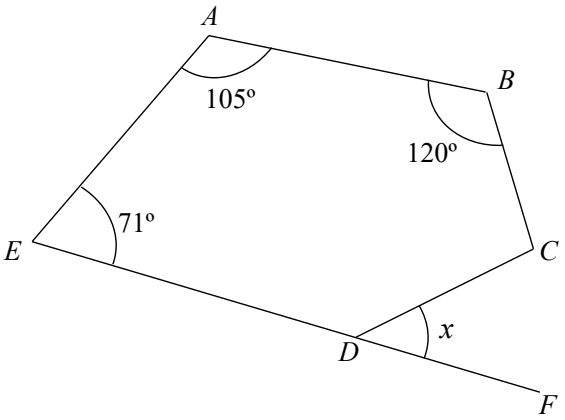
(1)

.....

(1)

(Total for Question 23 is 2 marks)

24



ABCDE is a pentagon
EDF is a straight line

Angle *CDE* is 30º greater than angle *BCD*

Work out the size of angle *x*
You must show all your working.

°

.....

(Total for Question 24 is 4 marks)

25 (a) Complete the table of values for $y = x^2 - x - 1$

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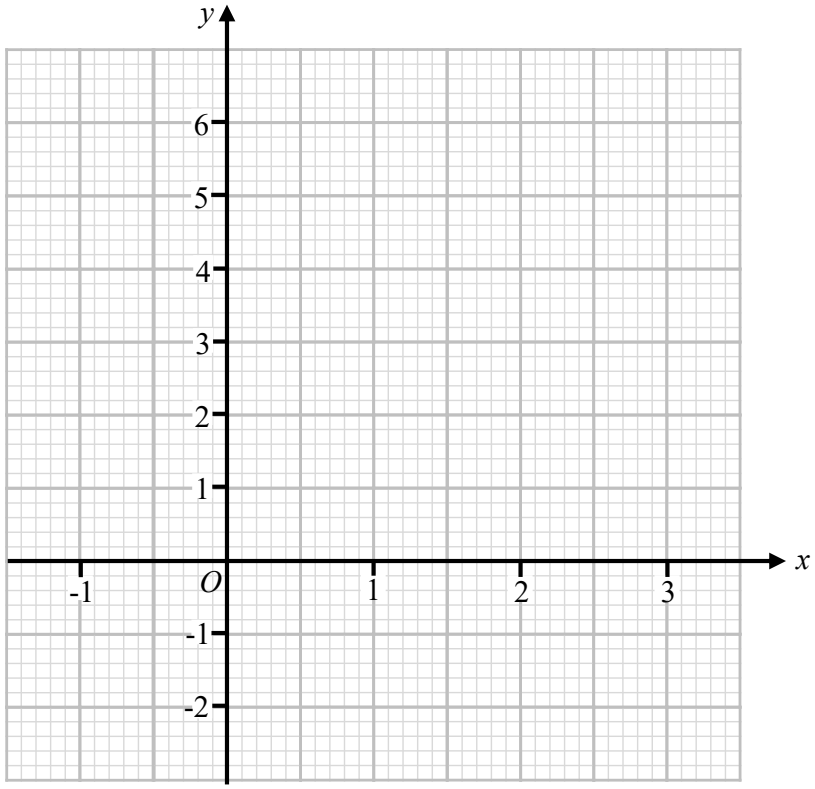
x	-1	0	1	2	3
y					

(2)

(b) On the grid, draw the graph of $y = x^2 - x - 1$ for values of x from -1 to 3



(2)

(c) Using your graph, find estimates for the solutions of the equation $x^2 - x - 1 = 0$

.....

(2)

(Total for Question 25 is 6 marks)

26 (a) Make t the subject of $h = 3t - 4$

VIDEO SOLUTIONS

.....

(2)

(b) $y = 3x^2 - 12$

Work out the value of y when $x = 5$

.....

(2)

(c) Simplify $(m^4)^3$

.....

(1)

(Total for Question 26 is 5 marks)

TOTAL FOR PAPER IS 80 MARKS