Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number	Candidate Number

Mathematics

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Foundation Tier

Predicted Paper 2F – 3rd June 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 2. 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 down the value of the 5 in the number 3507

.....

(Total for Question 1 is 1 mark)

2 Write 32% as a fraction
Give your answer in its simplest form

.....

(Total for Question 2 is 2 marks)

3 Change 4 metres into centimetres

..... cm

(Total for Question 3 is 1 mark)

4 Write down the first even multiple of 9

.....

(Total for Question 4 is 1 mark)

5 Solve $x - 5 = -2$

.....

(Total for Question 5 is 1 mark)

6 Here is a list of numbers.

8 20 23 25 32

VIDEO SOLUTIONS

From the list, write down

(a) a factor of 16

.....

(1)

(b) a prime number

.....

(1)

(c) a cube number

.....

(1)

(Total for Question 6 is 3 marks)

7 Nicky is buying a campervan. The campervan costs £24,000 plus VAT at 20%.

Nicky pays a deposit of £7000. She then pays the rest of the cost in 40 equal monthly payments.

How much is each monthly payment?

£.....

(Total for Question 7 is 4 marks)

8 (a) Simplify $3 \times m \times 7 \times p$

VIDEO SOLUTIONS

.....

(1)

(b) Simplify $t \times t \times t$

.....

(1)

(c) Simplify $3n^2 + 3n^2$

.....

(1)

(Total for Question 8 is 3 marks)

---

9 (a) Work out the value of $\dfrac{2.4 + 3.1^2}{\sqrt{1.087}}$

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

.....

(2)

(b) Write your answer to part (a) correct to 2 decimal places

.....

(1)

(Total for Question 9 is 3 marks)

10 Neil left his home at 8am and walked to the supermarket.
The supermarket is 2.5 miles from his home.
He got to the supermarket at 8:40am.

(a) Work out the average speed Neil was walking at.

VIDEO SOLUTIONS

..... mph

(2)

Neil spent 38 minutes in the supermarket and then walked home.
He took 50 minutes to walk home.

(b) At what time did Neil get home?

.....

(2)

(Total for Question 10 is 4 marks)

---

11 There are 400 stickers for sale in a store.

Sallie buys $\frac{4}{5}$ of the stickers.

Sallie then gives $\frac{3}{8}$ of her stickers to Shona.

Write the number of stickers Sallie now has to the number of stickers Shona has.

Give your answer in the form $n : 1$

.....

(Total for Question 11 is 2 marks)

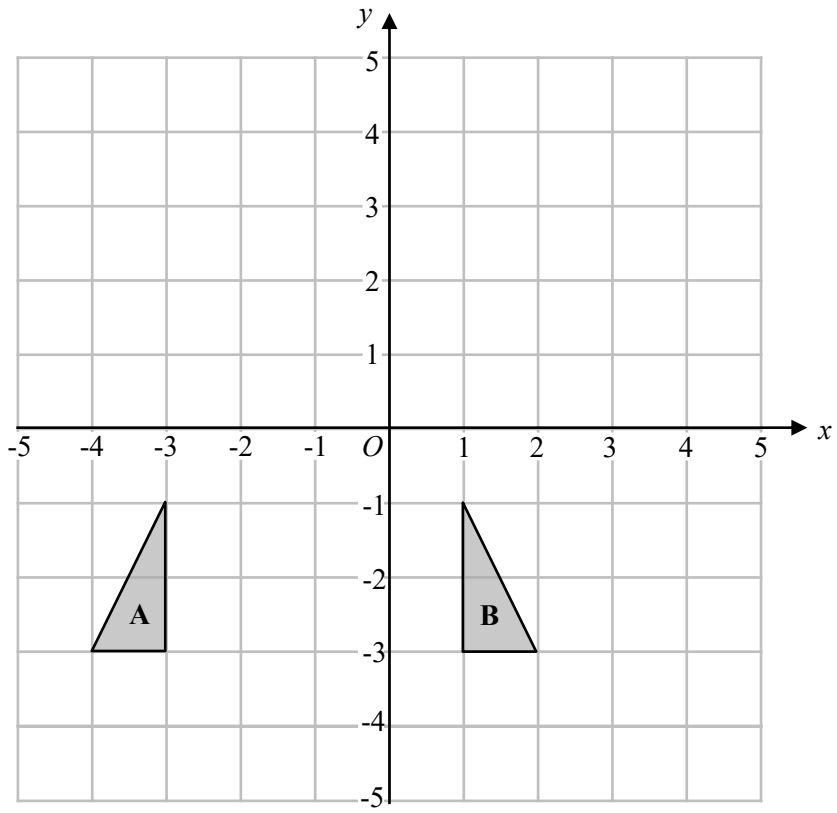
12 Work out 46% of 240

VIDEO SOLUTIONS

.....

(Total for Question 12 is 2 marks)

13



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

.....

.....

(Total for Question 13 is 2 marks)

14 65 students from Year 10 and Year 11 are asked how they usually travel to school.

VIDEO SOLUTIONS

35 students are in Year 10
10 of the 28 students who usually walk are in Year 11
12 Year 10 students cycle
19 students get the bus

(a) Use the information to complete the two way table.

	Walk	**Bus**	**Cycle**	**Total**
Year 10				
Year 11				
Total				

(3)

One of the Year 11 students is chosen at random.

(b) Write down the probability that this student usually cycles to school.

.....

(2)

(c) What is the modal method of travelling to school?

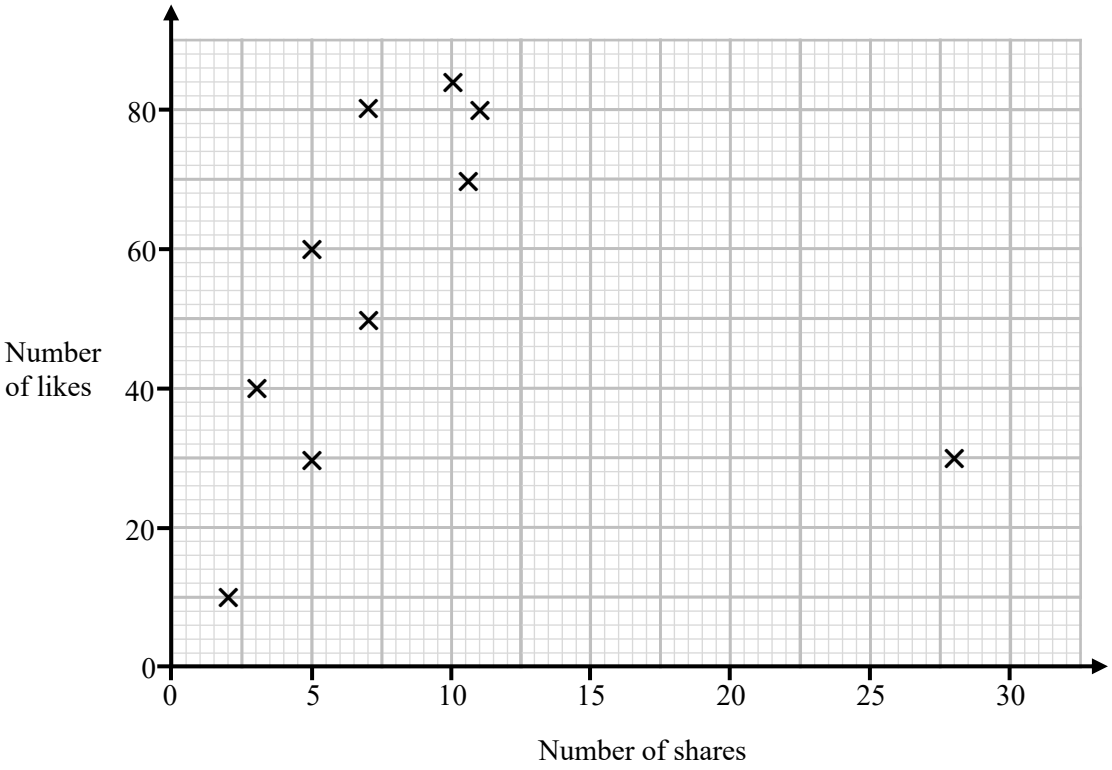
.....

(1)

(Total for Question 14 is 6 marks)

15 The scatter graph shows information about the number of likes and shares of ten different posts to a social media account.

VIDEO SOLUTIONS



One of the points is an outlier.

(a) Write down the coordinates of this point.

(..... , ...)

(1)

(b) For all the other points write down the type of correlation.

.....

(1)

The same account makes an eleventh post which had 72 likes.

(c) Estimate the number of shares this post had.

.....

(2)

(Total for Question 15 is 4 marks)

16 Write 612 as a product of its prime factors.
Give your answer in index form.

VIDEO SOLUTIONS

.....

(Total for Question 16 is 2 marks)

17 (a) Write 0.0409 in standard form.

.....

(b) Write 2.38×10^7 as an ordinary number. **(1)**

.....

(1)

(c) Work out the value of $(1.4 \times 10^{-5}) \div (2.7 \times 10^2)$
Give your answer in standard form correct to 3 significant figures.

.....

(2)

(Total for Question 17 is 4 marks)

18 A number, h, is rounded to 1 decimal place.

The result is 2.1

Write down the error interval for h.

..... $\leq h <$ .....

(Total for Question 18 is 2 marks)

19 (a) Expand and simplify $4(2k + 1) - (k - 3)$

VIDEO SOLUTIONS

.....

(b) Simplify $(3a^4b^2)^3$

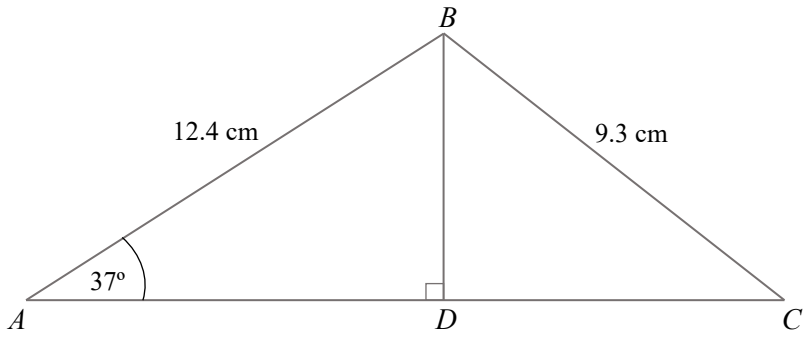
(2)

.....

(2)

(Total for Question 19 is 4 marks)

20



ADC is a straight line.

Work out the length of *CD*.
Give your answer correct to 1 decimal place.

..... cm

(Total for Question 20 is 4 marks)

21 The frequency table gives information about the length of 50 parsnips.

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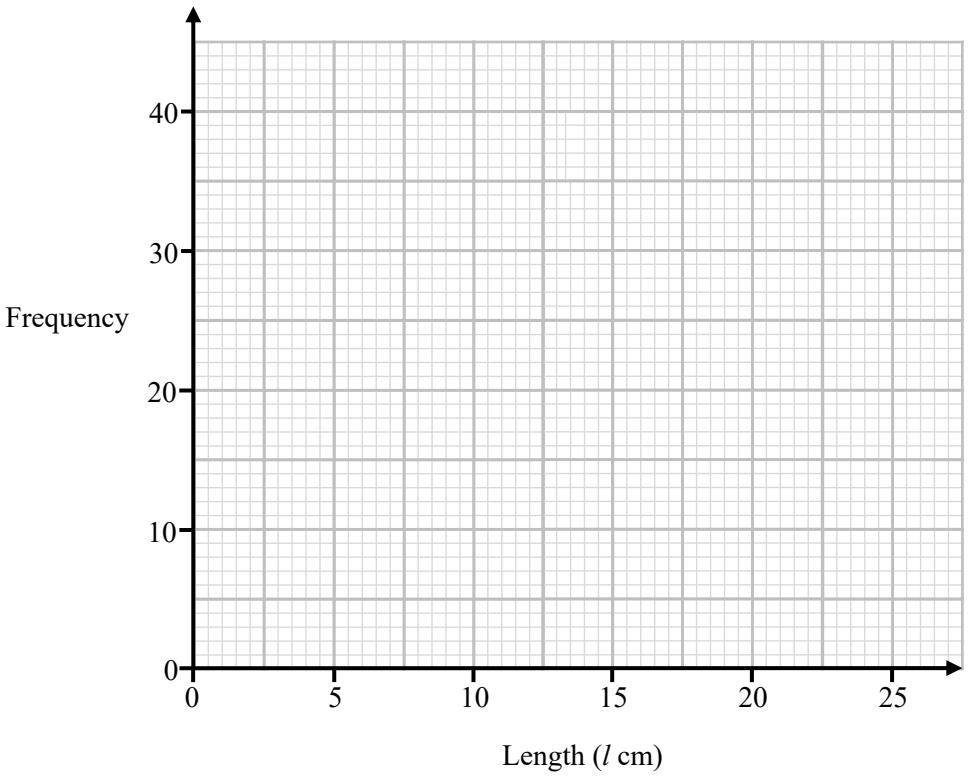
Length (l cm)	Frequency
$0 < l \leq 5$	2
$5 < l \leq 10$	5
$10 < l \leq 15$	15
$15 < l \leq 20$	20
$20 < l \leq 25$	8

(a) Find the class interval that contains the median.

.....

(1)

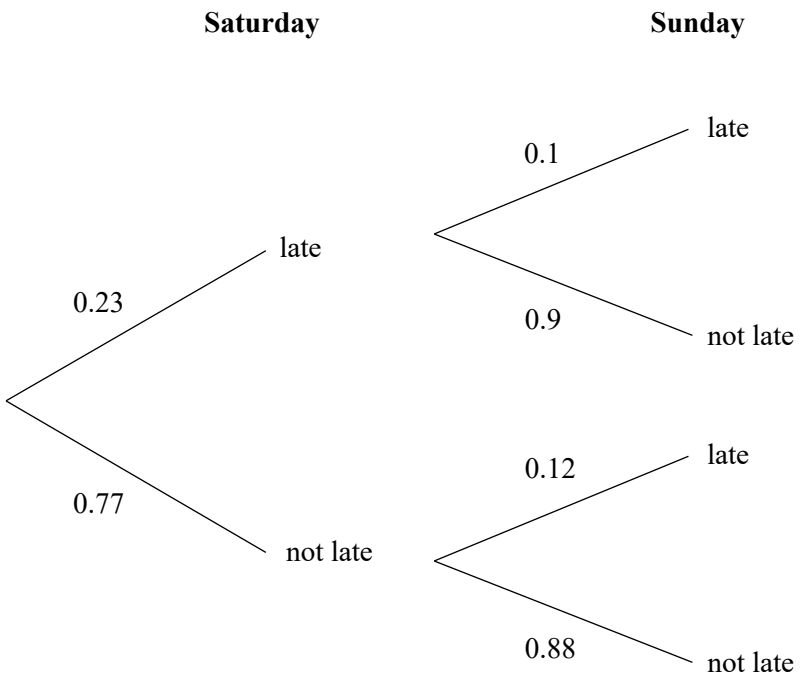
(b) On the grid, draw a frequency polygon for the information in the table.



(2)

(Total for Question 21 is 3 marks)

22 The probability tree diagram shows the probabilities that Megan will be late for work on Saturday and on Sunday.



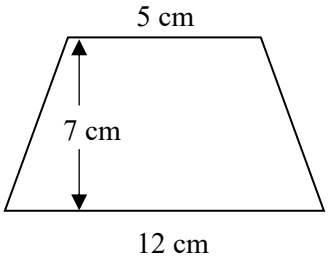
Calculate the probability that Megan will be late on exactly one of the two days.

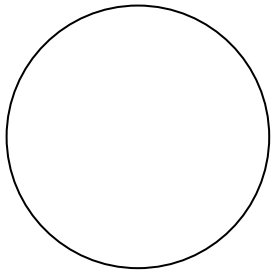
.....

(Total for Question 22 is 3 marks)

23 Here is a trapezium and a circle.

VIDEO SOLUTIONS





The area of the trapezium is equal to the area of the circle.

Work out the diameter of the circle.

Give your answer to 3 significant figures.

..... cm

(Total for Question 23 is 3 marks)

24 Matt and Damien share 210 dice in the ratio 2:5

Damien gives some of the dice to Matt.

Matt and Damien now share the dice in the ratio 2:3

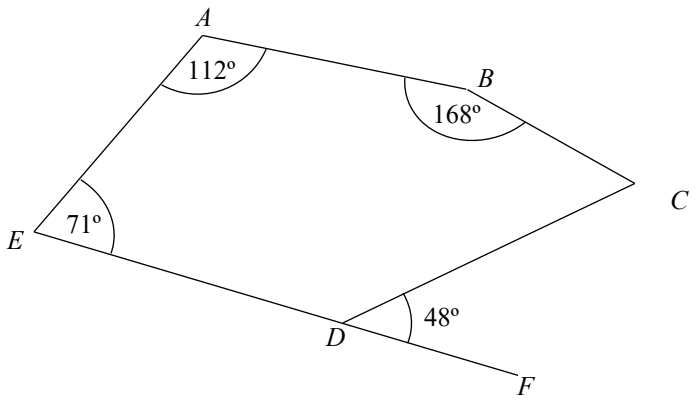
Work out the percentage increase in the number of dice Matt has.

VIDEO SOLUTIONS

.....%

(Total for Question 24 is 3 marks)

25



ABCDE is a pentagon
EDF is a straight line

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

°

.....

(Total for Question 25 is 3 marks)

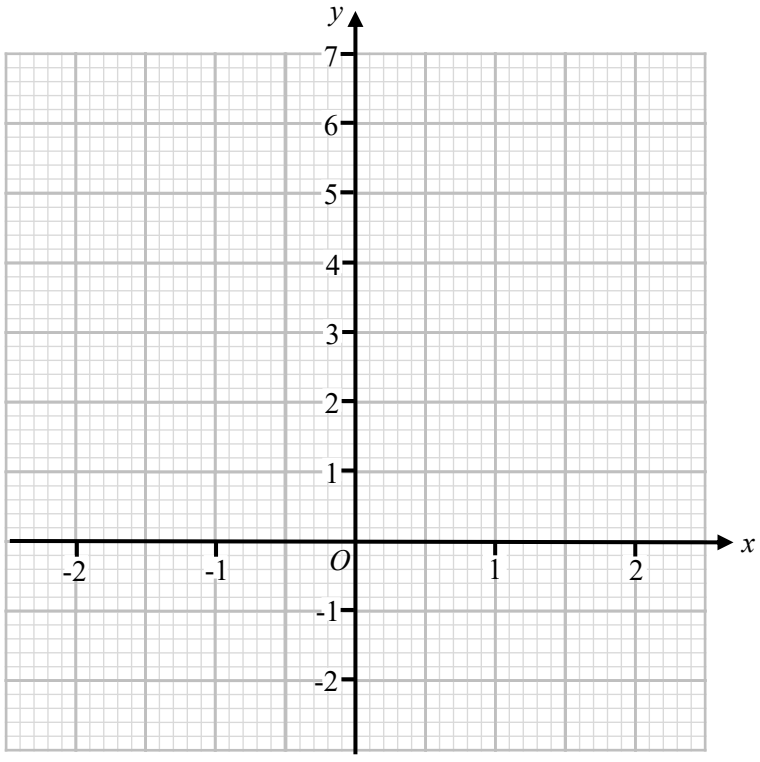
26 (a) Complete the table of values for $y = x^2 - 2x - 1$

VIDEO SOLUTIONS

x	-2	-1	0	1	2
y					

(2)

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



(2)

(c) Using your graph, find estimates for the solutions of the equation $x^2 - 2x - 1 = -1.4$

.....

(2)

(Total for Question 26 is 6 marks)

27 (a) Make t the subject of $h = 7t + 2$

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.....

(2)

(b) $y = 3x^2 - 5$

Work out the value of y when $x = 4$

.....

(2)

(Total for Question 27 is 4 marks)

TOTAL FOR PAPER IS 80 MARKS