Candidate surname	Other names

Maths Planner

Edexcel

2024 Predicted Paper

Mathematics

PAPER 1 (Non-Calculator)

Foundation Tier

Time 1 hour 30 minutes

Caution: These topics are not guaranteed to show up, please focus on all topic areas. They have been selected using analysis on previous official exam papers.

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Total Marks

80

Q	Topic(s)	Marks
1	Converting FDP	/ 1
2	Rounding	/ 1
3	Metric Unit Conversions	/ 1
4	Simplifying Expressions	/ 2
5	Order of Operations (BIDMAS)	/ 1
6	Percentages of Amounts	/ 2
7	Factors, Multiples and Primes	/ 2
8	Solving and Rearranging Equations	/ 3
9	Probability Scales	/ 3
10	FDP with Ratio	/ 2
11	Angles in Quadrilaterals	/ 2
12	Systematic Listing Outcomes	/ 2
13	Written Calculations and Percentages	/ 6
14	Pictograms	/ 4

Q	Topic(s)	Marks
15	Function Machines	/ 3
16	Algebraic Perimeter	/ 3
17	Transformations	/ 4
18	Plans and Elevations / Circumference	/ 4
19	Estimation	/ 3
20	Ordering Fractions / Operations	/ 4
21	Area of Quadrilaterals	/ 4
22	Averages from Frequency Table	/ 4
23	Gradient and Equation of Line	/ 3
24	Calculating with Speed	/ 3
25	Product of Primes	/ 2
26	Converting Standard From	/ 2
27	Quadratic Graphs	/ 4
28	Expanding Brackets / Laws of Indices	/ 5

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in you working.

1 Write 2.5 as a fraction.

.....

(Total marks for Question 1 is 1 mark)

2 Round 945 670 to 2 significant figures.

.....

(Total marks for Question 2 is 1 mark)

3 Convert 0.28 kg to grams.

..... grams

(Total marks for Question 3 is 1 mark)

4 Fully simplify expressions

(a) $x \times x \times x \times 2$

.....
(1)

(b) $-2e + 7e - e$

.....
(1)

(Total marks for Question 4 is 2 marks)

5 Work out $\sqrt{64} + (-2)^2$

.....

(Total marks for Question 5 is 1 mark)

6 Find 30% of 2.5 hours.

.....

(Total marks for Question 6 is 2 marks)

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7 Here is a list of numbers.

2 24 21 9 48 18 27 3

(a) Write down all the prime numbers in the list.

.....

(1)

(b) From the numbers in the list, write down a multiple of **both** 6 and 9

.....

(1)

(Total marks for Question 7 is 2 marks)

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8 (a) Solve $3a - 7 = 8$

$a =$ .....

(2)

(b) Make x the subject of $\frac{x}{y} = 3$

.....

(1)

(Total marks for Question 8 is 3 marks)

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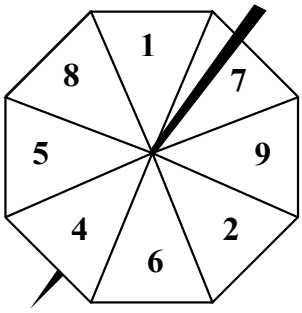
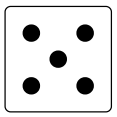
9 Here is a fair 8-sided spinner and dice.



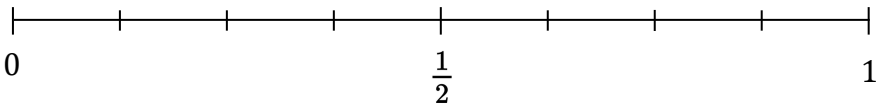
Spinner



Dice

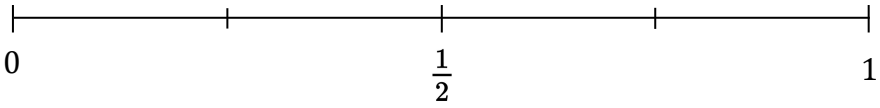
(a) On the probability scale, mark with a cross (X) the probability of the spinner landing on a square number.

(1)



(b) On the probability scale, mark with a cross (X) the probability of the spinner landing on an even number **AND** the dice landing on an odd.

(2)



(Total marks for Question 9 is 3 marks)

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10 In a bag there are red, blue and green counters in the ratio 8 : 5 : 7

What percentage of the bag is green?

..... %

(Total marks for Question 10 is 2 marks)

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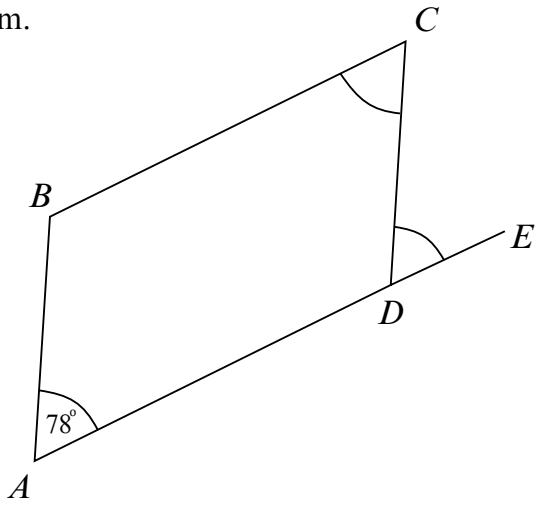
11 $ABCD$ is a parallelogram.
ADE is a straight line.



(a) Find the size of angle BCD.

BCD = ... °
(1)

(b) Find the size of angle CDE.

CDE = ... °
(1)

(Total marks for Question 11 is 2 marks)

---

12 Two games are played.
In each game you can either Win, Draw or Lose.

List all the possible outcomes of results from playing the two games.

.....

.....

.....

.....

(Total marks for Question 12 is 2 marks)

---

13 Felix is buying a new smart phone.
A phone shop is offering the following contract deal.

Smart phone	£978	one-time payment
Sim (unlimited calls / data)	£13	per month for the first 9 months, then £19 per month there after.

(a) Felix signs a 2 year contract.
The cost of the smart phone is evenly split across the 2 years.
Work out how much they will spend over the entire duration of the contract.

£ .....
(3)

(b) After one year, Felix's phone company offers them a deal to pay off what they still owe on the contract with a 25% discount.
Calculate how much money Felix will save if they accept this offer.

£ .....
(3)

(Total marks for Question 13 is 6 marks)

14 The incomplete pictogram shows information about the number movie genres tickets sold at a cinema on a Friday night.

Action	
Animation	
Romance	
Horror	

Key:

represents 24 tickets

(a) How many Romance movie tickets were sold?

.....

(1)

A total of 144 tickets were sold.

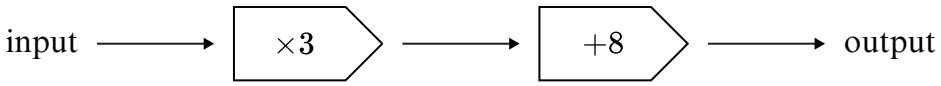
Twice as many Animation movie tickets were sold compared to Horror movie tickets.

(b) Complete the pictogram.

(3)

(Total marks for Question 14 is 4 marks)

15 The diagram shows a number machine.

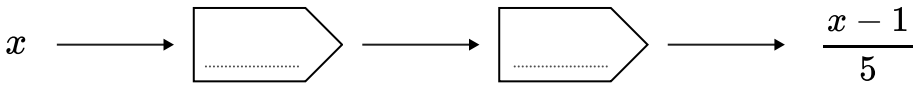


(a) Work out the input when the output is -13

.....

(1)

Here is a function machine.



(b) Complete the function machine. **(2)**

(Total marks for Question 15 is 3 marks)

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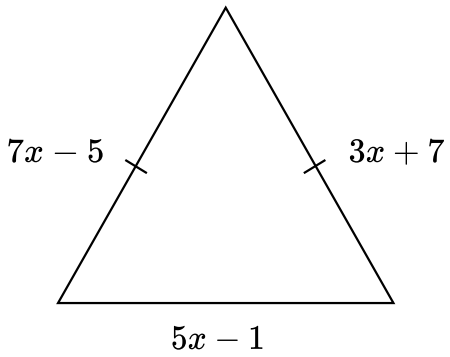
16 Here is an isosceles triangle with centimetre lengths.



Work out the value of its perimeter.

..... cm

(Total marks for Question 16 is 3 marks)

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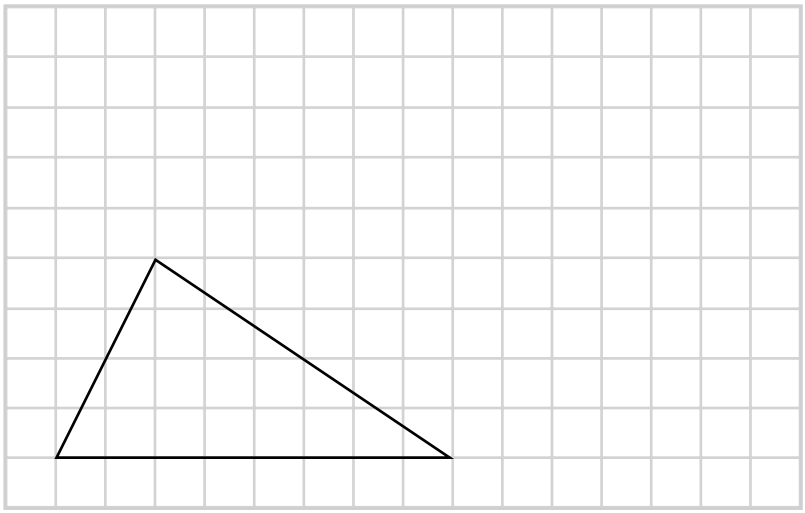
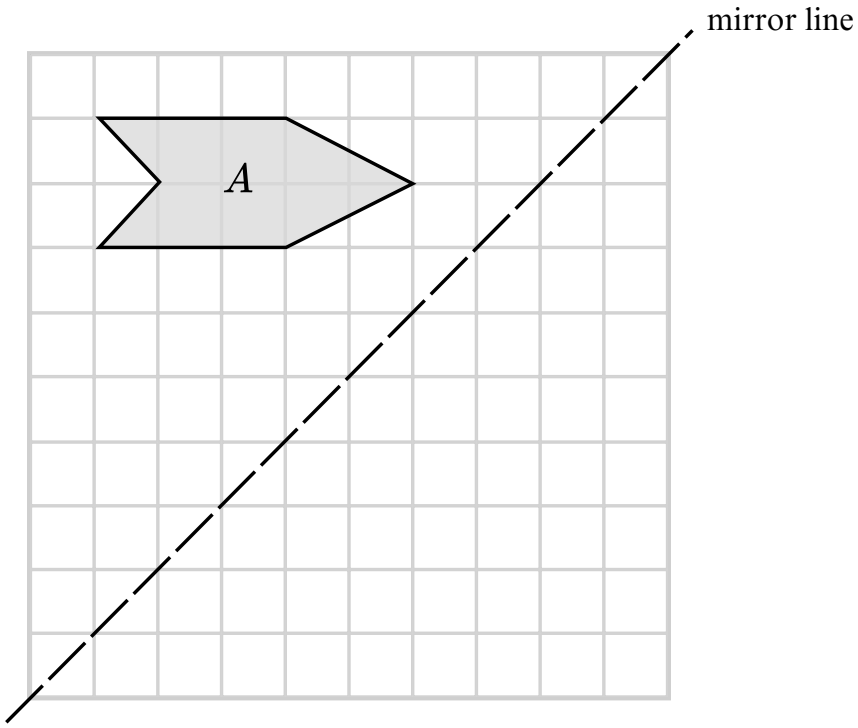
17 (a) On the grid, draw an enlargement of the shape with a scale factor of $\frac{1}{2}$



(2)

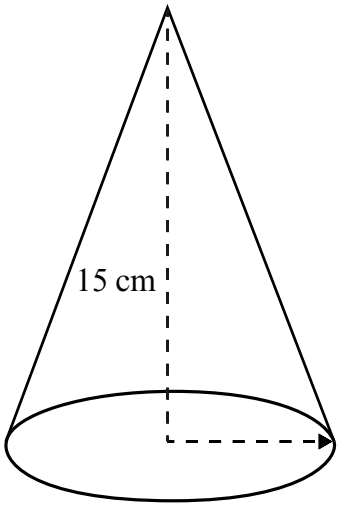
(b) Reflect shape **A** in the mirror line.



(2)

(Total marks for Question 17 is 4 marks)

18 (a) Draw a plan view of this cone on the centimetre grid.



height : radius = 5 : 1

(2)

(b) Calculate the circumference of the cone's base, in centimetres.
Give your answer in terms of π

..... cm

(2)

(Total marks for Question 18 is 4 marks)

19 $\dfrac{4.85 \times 0.429}{0.0501}$

Keertan works out that the answer to this calculation is 0.04.
Use estimation to show that he is incorrect.

(Total marks for Question 19 is 3 marks)

---

20 Here are some mixed numbers and fractions.

$$1\frac{7}{6} \qquad 2\frac{1}{4} \qquad 2\frac{2}{3} \qquad \frac{25}{12}$$

(a) Sort them into descending order.

.....

(2)

(b) Find their range.

.....

(2)

(Total marks for Question 20 is 4 marks)

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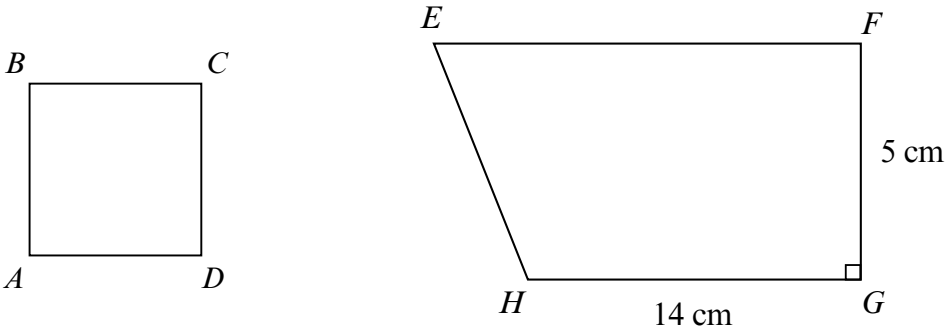
21 *ABCD* is a square.
EFGH is a trapezium.



ABCD has a perimeter of 200 mm.

The area of the square is one third the area of the trapezium.

Work out the size of length *EF*.

..... cm

(Total marks for Question 21 is 4 marks)

22 The table below gives information about the time taken for a group of 20 runners to complete a 5 km park run.

Time (t minutes)	Frequency
$20 < t \leq 22$	2
$22 < t \leq 24$	4
$24 < t \leq 28$	3
$28 < t \leq 32$	7
$32 < t \leq 36$	4

(a) Find the modal class.

.....

(1)

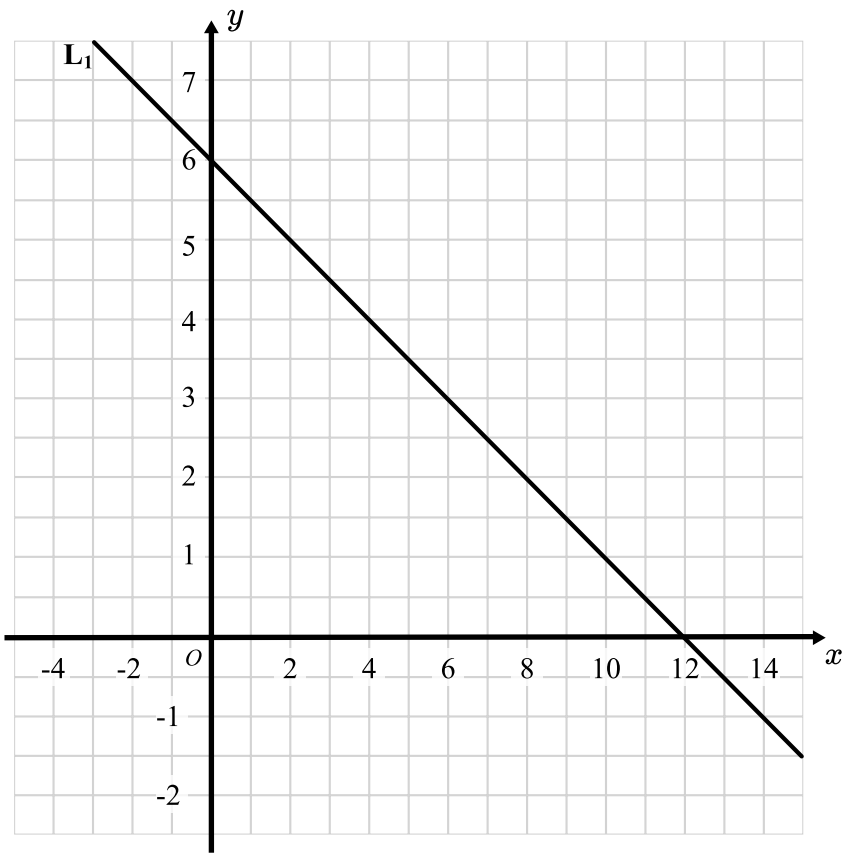
(b) Work out an estimate for the mean time for the group.

.....minutes

(3)

(Total marks for Question 22 is 4 marks)

23 The line $\mathbf{L_1}$ is shown on the grid.



(a) Find the gradient of the line $\mathbf{L_1}$

.....

(2)

(b) Write down the equation of the line $\mathbf{L_1}$ in the form $y = mx + c$

.....

(1)

(Total marks for Question 23 is 3 marks)

24 A car travels 45 miles in 40 minutes.
Work out the speed of the car in mph.

..... mph

(Total marks for Question 24 is 3 marks)

25 Express 90 as the product of its prime factors.
Give your answer in index form.

.....

(2)

(Total marks for Question 25 is 2 marks)

26 (a) Write 8104000 in standard form

.....

(1)

(b) Write 6.1×10^{-4} as an ordinary number.

.....

(1)

(Total marks for Question 26 is 2 marks)

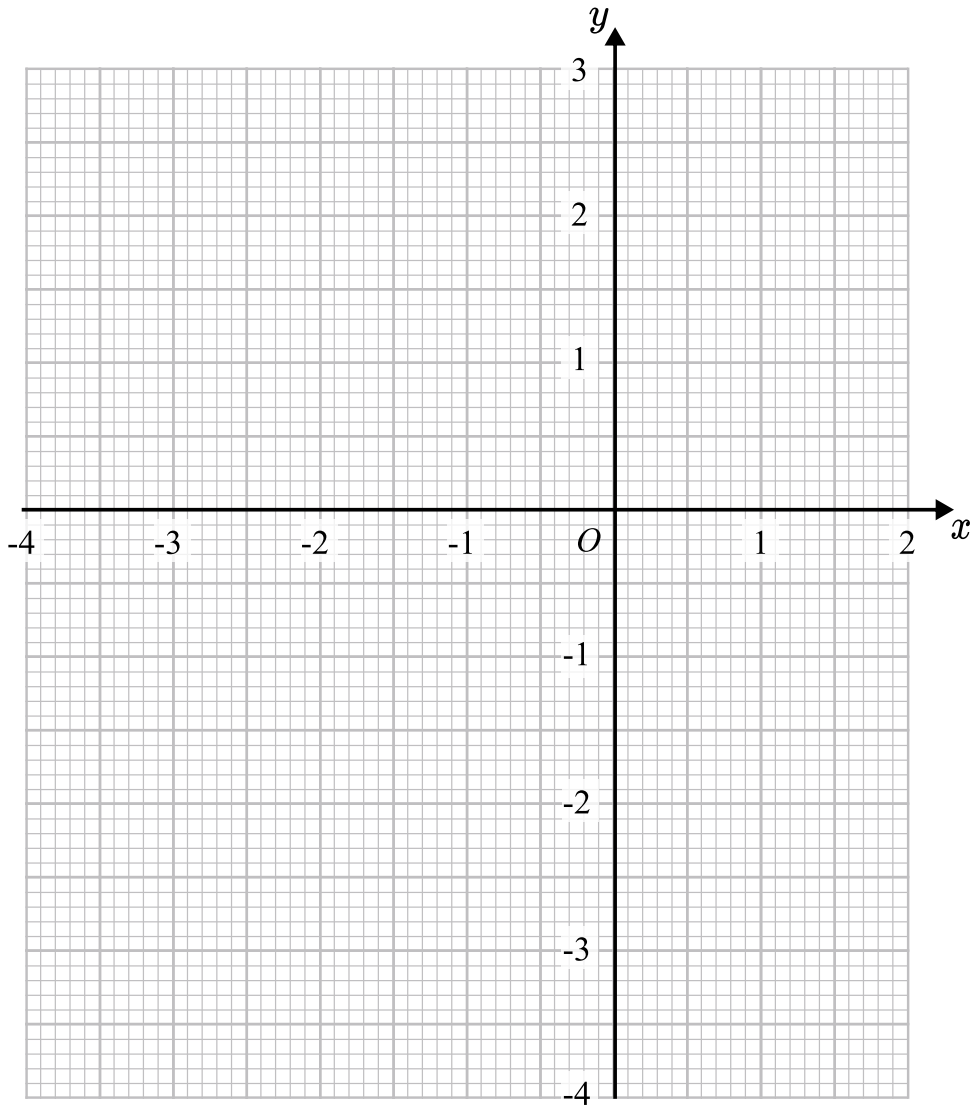
27 (a) Complete the table of values for $y = x^2 + 3x - 1$

x	-4	-3	-2	-1	0	1
y		-1				3

(2)

(b) On the grid, draw the graph of $y = x^2 + 3x - 1$ for x values from -4 to 1

(2)



(Total marks for Question 27 is 4 marks)

28 (a) Expand and simplify $(x^2 + 3)(x^2 + 5)$

.....

(2)

(b) Simplify $\frac{a^7}{a^{-4}}$

.....

(1)

$(4 \times 2^3)^5 = 2^x$

(c) Find the value of x

$x =$.....

(2)

(Total marks for Question 28 is 5 marks)

TOTAL FOR PAPER IS 80 MARKS