Candidate surname	Other names

Maths Planner

Edexcel

2024 Practice Paper

Mathematics

PAPER 2 (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 Metric Units	/ 1
2	Names of Polygons	/ 1
3	FDP Conversion	/ 1
4	Circle Properties	/ 1
5	Percentages of Amounts	/ 1
6	Simplifying Expressions	/ 3
7	Time Calculations	/ 2
8	Writing as a Percentage	/ 2
9	Ratio 1:n / Sharing Ratio	/ 4
10	Direct Proportion	/ 4
11	Averages	/ 3
12	Money Problem	/ 4
13	Probability	/ 5
14	Area and Perimeter	/ 4

Q	Topic(s)	Marks
15	Transformations: Reflection	/ 2
16	Using your Calculator / Rounding	/ 3
17	Area of Circles	/ 3
18	Volume of Prism	/ 3
19	Scatter Graphs	/ 2
20	Calculating with Speed	/ 3
21	Angles in Polygons	/ 3
22	Trigonometry	/ 2
23	Lowest Common Multiple (LCM)	/ 2
24	Standard Form	/ 3
25	Compound Interest	/ 4
26	Probability / Ratio	/ 4
27	Quadratic Graphs	/ 4
28	Upper and Lower Bounds / Indice Laws	/ 6

Maths Planner

Student Warning

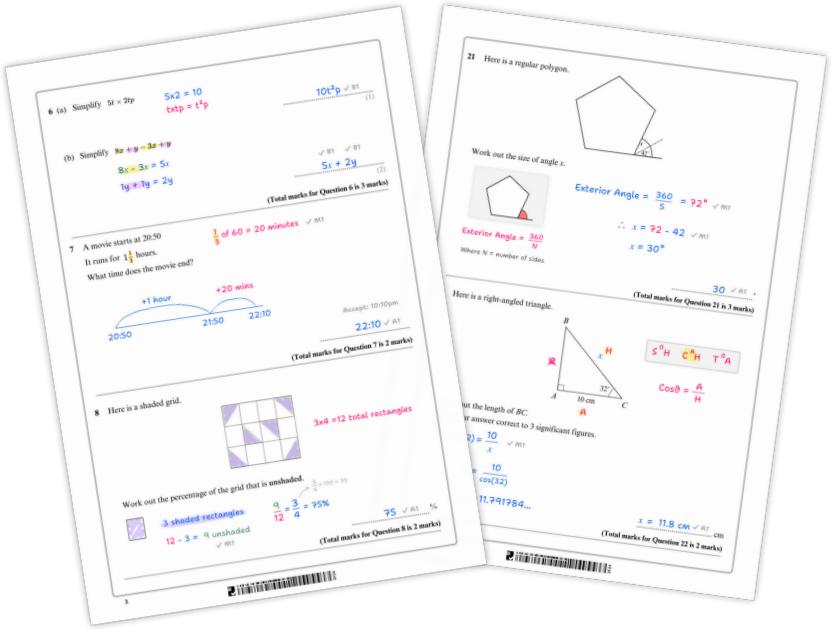
The questions in this paper will not be in the exam

These topics are **not guaranteed** to show up in your Paper 2 exam. Please make sure to revise **all topic areas**, especially since topics covered in Paper 1 can still come up.

These questions have been selected using analysis on previous official exam papers.

Worked Solutions

SCAN ME



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in you working.

1 Convert 240 centimetres to metres.

.....

(Total marks for Question 1 is 1 mark)

2 How many sides does a Hexagon have?

.....

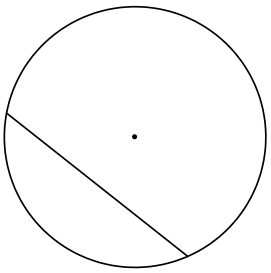
(Total marks for Question 2 is 1 mark)

3 Write $\frac{7}{8}$ as a decimal.

.....

(Total marks for Question 3 is 1 mark)

4 Write down the mathematical name for the line shown below.



.....

(Total marks for Question 4 is 1 mark)

5 Find 15% of 32

.....

(Total marks for Question 5 is 1 mark)

6 (a) Simplify $5t \times 2tp$

.....

(1)

(b) Simplify $8x + y - 3x + y$

.....

(2)

(Total marks for Question 6 is 3 marks)

---

7 A movie starts at 20:50

It runs for $1\frac{1}{3}$ hours.

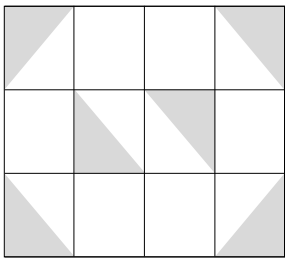
What time does the movie end?

.....

(Total marks for Question 7 is 2 marks)

---

8 Here is a shaded grid.



Work out the percentage of the grid that is **unshaded**.

..... %

(Total marks for Question 8 is 2 marks)

---

9 (a) Write 8 : 12 in the form 1 : n

.....

(1)

(b) Tony and Sarah have money saved in the ratio 7 : 11

Sarah has saved £24 more than Tony.

Work out how much they have saved in total.

£.....

(3)

(Total marks for Question 9 is 4 marks)

---

10 At a butchers

5kg of chicken costs £57.

2kg of chicken and 800g of beef steak cost £41.20.

Work out the total cost for 500g of chicken and 1.5kg of beef steak.

£.....

(Total marks for Question 10 is 4 marks)

---

11 For a set of five numbers,

the median is 7

the mode is 4

the range is 9

three of the numbers are prime

Work out the **only** possible set of five numbers.

....

(Total marks for Question 11 is 3 marks)

12 A group of three friends went on holiday.
The total cost for all three was £3600.

32% was spent on flights

$\frac{2}{5}$ was spent on hotels

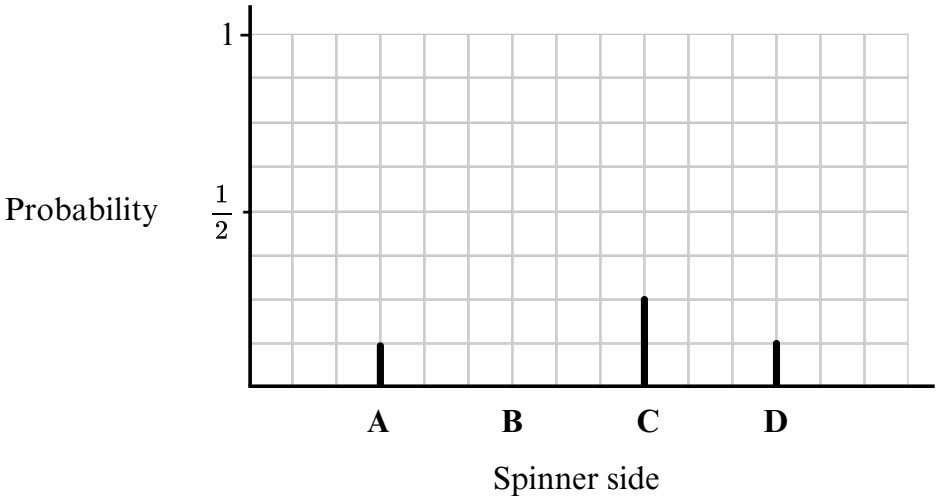
the remainder was spending money

Given the costs were split equally between them,
Work out how much spending money each friend had.

£ .....

(Total marks for Question 12 is 4 marks)

13 A 4-sided biased spinner can land on either **A**, **B**, **C** or **D**.
The probabilities are shown on the chart below.



(a) Write down the probability the spinner will land on **D**.

.....
(1)

(b) Complete the chart for spinner side **B**.

(2)

(c) The spinner will be spun 28 times.
How many times is the spinner expected to land on **C**?

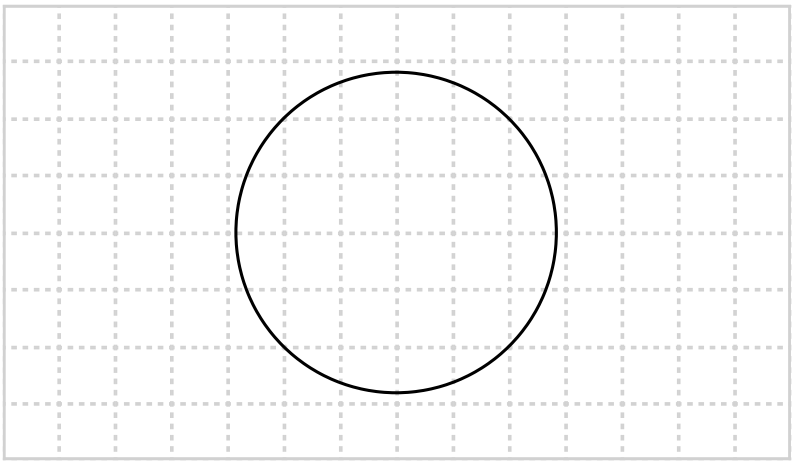
.....
(2)

(Total marks for Question 13 is 5 marks)

14 (a) One side of a parallelogram is drawn on this centimetre grid.
The parallelogram has **no** right angles.
Complete the parallelogram so it has an **area** of 40 cm²

(2)

(b) Each vertex of a square touches the circumference of the circle below.
Work out the perimeter of this square.

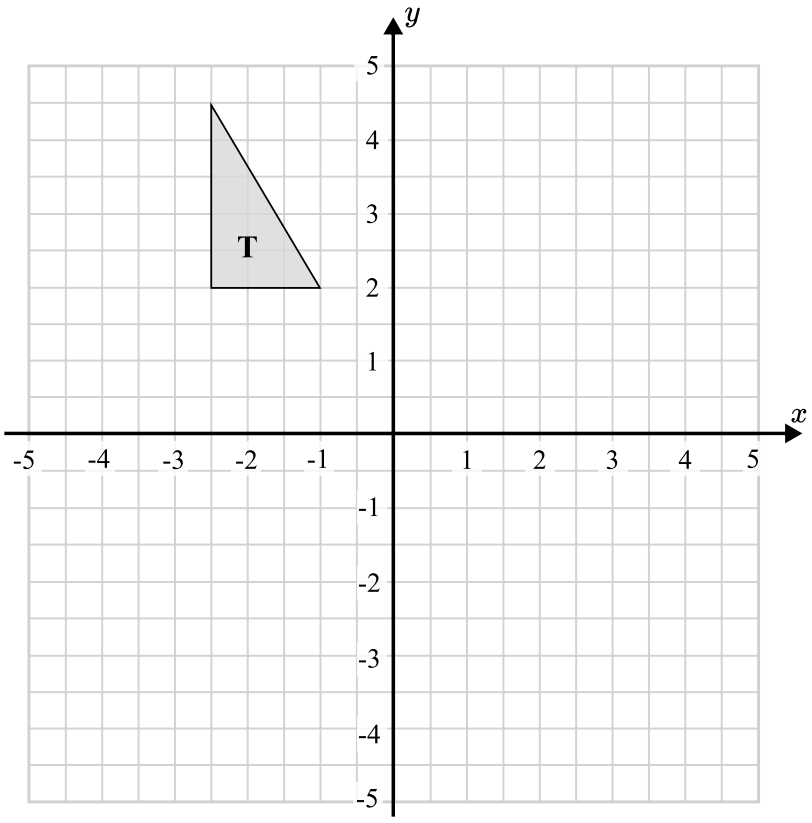


.....

(2)

(Total marks for Question 14 is 4 marks)

15



Reflect triangle **T** in the line $x = 1$
Label your image **S**.

(Total marks for Question 15 is 2 marks)

16 Use your calculator to work out $\sqrt{\dfrac{\sin 35^\circ + \sin 15^\circ}{\cos 20^\circ - \cos 35^\circ}}$

(a) Write down all the figures on your calculator display.

.....

(2)

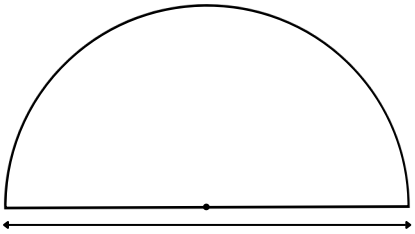
(b) Write your answer to part (a) correct to 3 decimal places.

.....

(1)

(Total marks for Question 16 is 3 marks)

17 The diagram shows a semi-circle.



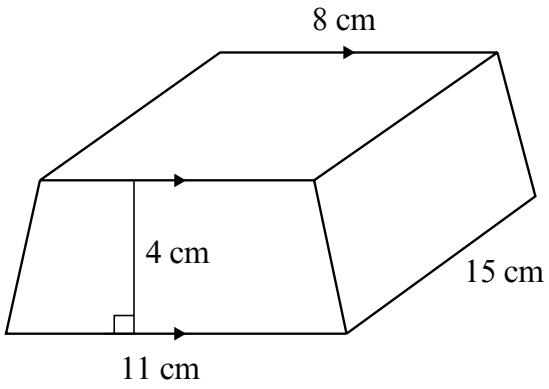
Work out the area of the semi-circle.

Give your answer in mm^2, correct to 1 decimal place.

..... mm^2

(Total marks for Question 17 is 3 marks)

18 Here is a prism.

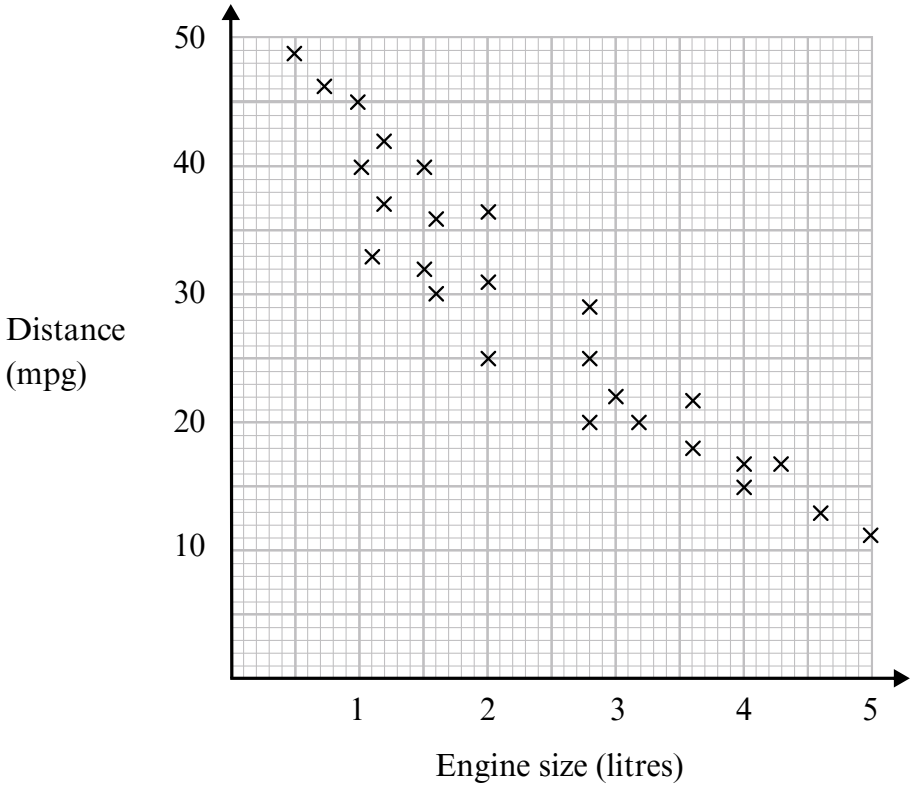


Work out the volume of this prism.

.....cm^3

(Total marks for Question 18 is 3 marks)

19 The scatter graph shows information on the distance cars travel (per gallon of fuel) and their engine size.



Using the scatter graph, find an estimate for the expected mpg for a 2.5 litre engine.

..... mpg

(Total marks for Question 19 is 2 marks)

20 Josh is competing in a 20 mile race.
He must run the first half and then cycle the remaining half.

After 24 minutes, Josh looks at his fitness watch and reads he has ran 1.8 miles.

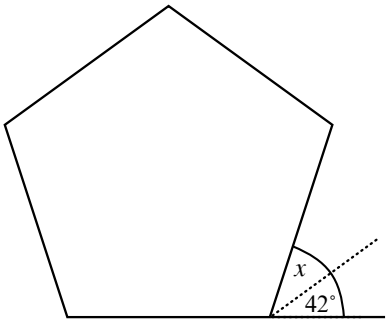
He continues this pace until he reaches the half way point.

Work out exactly how long the first half of the race takes Josh to complete.
Give your answer in, hours, minutes and seconds.

.....

(Total marks for Question 20 is 3 marks)

21 Here is a regular polygon.

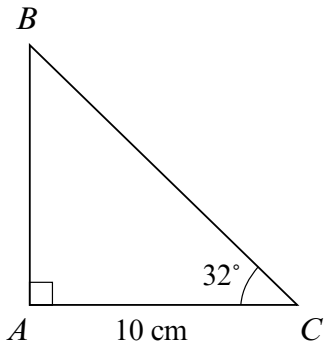


Work out the size of angle x.

.....°

(Total marks for Question 21 is 3 marks)

22 Here is a right-angled triangle.



Work out the length of BC.

Give your answer correct to 3 significant figures.

..... cm

(Total marks for Question 22 is 2 marks)

23 Find the lowest common multiple (LCM) of 95 and 225

.....

(Total marks for Question 23 is 2 marks)

---

24 (a) Write 7.5×10^{-6} as an ordinary number.

.....

(1)

(b) Work out $(3.92 \times 10^{8}) \div (1.4 \times 10^{2})$

Give your answer in standard form.

.....

(2)

(Total marks for Question 24 is 3 marks)

---

25 Joanne wants to invest £3800 into a high interest savings account.
These are the two banks she is considering.

Zupa Bank	**Sterling Bank**
Compound Interest Rates:	**Simple Interest Rates:**
6% for the **first** 6 months 3.2% thereafter	3.8% per annum

Work out the **difference** in interest Joanne would earn between the two banks after 4 years.

£ .....

(Total marks for Question 25 is 4 marks)

26 A bag contains coloured counters.

The table gives information on the probabilities that, when a counter is take at random from the bag, the counter will be red or the counter will be purple.

Colour	red	blue	yellow	purple
Probability	0.3			0.22

The ratio

number of blue counters : number of yellow counters = 3 : 1

There are 60 red counters in the bag.
Work out the number of blue counters in the bag.

.....

(Total marks for Question 26 is 4 marks)

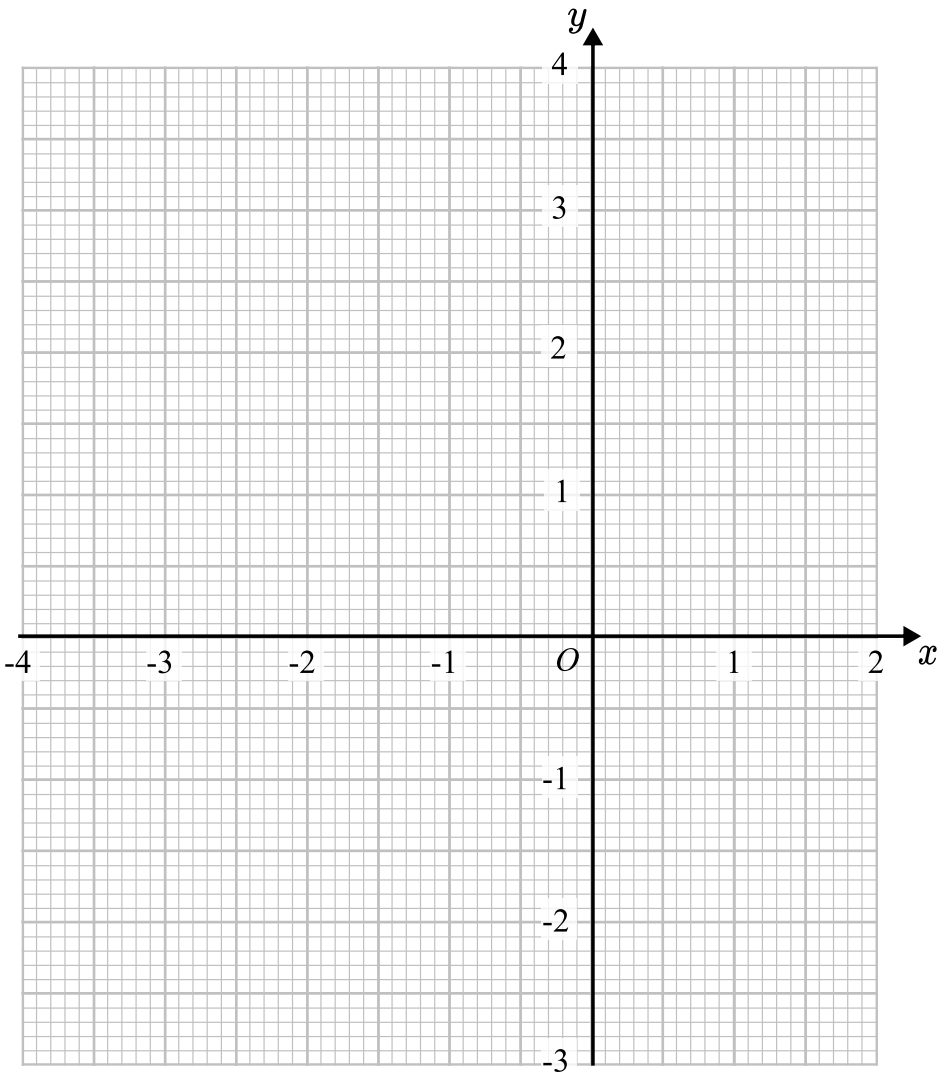
27 (a) Complete the table of values for $y = 1 - 3x - x^2$

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

(1)

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

(2)



(c) Using your graph, write down the coordinates of the turning point.

.....

(1)

(Total marks for Question 27 is 4 marks)

28 (a) The number, *n,* is rounded to 1 decimal place.

The result is 10.3

Complete the error interval for *n.*

..... ≤ *n* < .....

(2)

(b) Simplify $\dfrac{5x^2 \times x^{-5}}{x^{-7}}$

.....

(2)

(c) Simplify $(3xy^2)^4$

.....

(2)

(Total marks for Question 28 is 6 marks)

TOTAL FOR PAPER IS 80 MARKS