Candidate surname	Other names

Maths Planner

Edexcel

2024 Practice Paper

Mathematics

PAPER 3 (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	Metric Conversions	/ 1
2	Place Value	/ 1
3	FDP Conversions	/ 2
4	Simplifying / Expanding	/ 2
5	Fractions of Amounts	/ 1
6	Squares, Primes & Multiples	/ 2
7	Probability Scales	/ 3
8	Frequency Trees	/ 4
9	Ratio	/ 2
10	Mean from a List	/ 3
11	Names of Shapes	/ 3
12	Angles in Triangles / Equations	/ 3
13	Direct Proportion	/ 3
14	Volume of Cuboid	/ 3

Q	Topic(s)	Marks
15	Exchange Rates	/ 4
16	Pie Charts	/ 2
17	Plans and Elevations	/ 4
18	Angles in Parallel Lines	/ 2
19	Trigonometry	/ 2
20	Inequalities	/ 4
21	Scale Drawings / Bearings	/ 4
22	Circles	/ 3
23	Frequency Polygon	/ 2
24	Standard Form	/ 4
25	Combined Ratio	/ 3
26	Compound Interest	/ 4
27	Algebraic Manipulation	/ 7
28	Error Intervals	/ 2
29	Graphical Simultaneous Equations	/ 1

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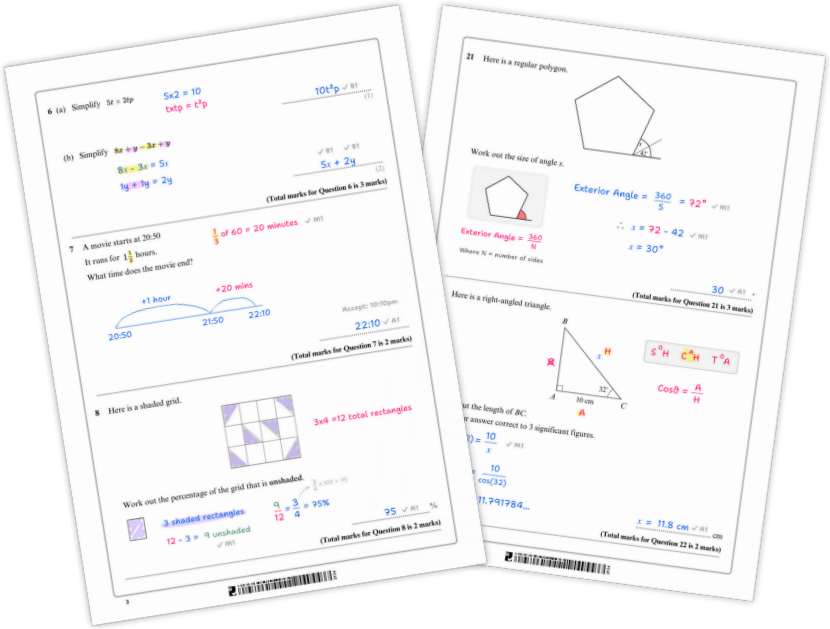
Student Warning

The questions in this paper will not be in the exam

These topics are **not guaranteed** to show up in your Paper 3 exam. Please make sure to revise **all topic areas**, especially since topics covered in Paper 1 and 2 can still come up.

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

Worked Solutions



Answer ALL questions.

Write your answers in the spaces provided.

You must write down all stages in you working.

1 Convert 1200 millimetres into centimetres.

.....cm

(Total marks for Question 1 is 1 mark)

---

2 Write down the value of the 7 in 3740

.....

(Total marks for Question 2 is 1 mark)

---

3 (a) Write 4% as a decimal.

.....

(1)

(b) Write 0.01 as fraction.

.....

(1)

(Total marks for Question 3 is 2 marks)

---

4 (a) Simplify $x \times x \times x$

.....

(1)

(b) Expand $2(3x - 11)$

.....

(1)

(Total marks for Question 4 is 2 mark)

---

5 Work out $\frac{2}{3}$ of 57

.....

(Total marks for Question 5 is 1 mark)

1F24

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6 (a) Write down a two-digit square number which is a multiple of 4.

.....

(1)

(b) Alma say,

"A prime number cannot be even, because any even number will be divisible by 2."

Show with a counter example that Alma is wrong.

(1)

(Total marks for Question 6 is 2 marks)

---

7 There are 20 counters in a bag. The table shows information about their colour.

Colour	Red	Blue	Green	Yellow
Frequency	5	3		

There are the same number of green counters as yellow counters in the bag.

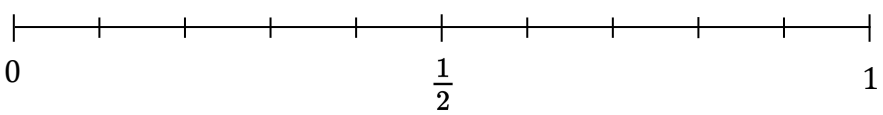
(a) Complete the table.

(1)

(b) A counter is selected at random from the bag.

Mark with a cross (X) on the scale below, the probability of the counter being green.

(2)



(Total marks for Question 7 is 3 marks)

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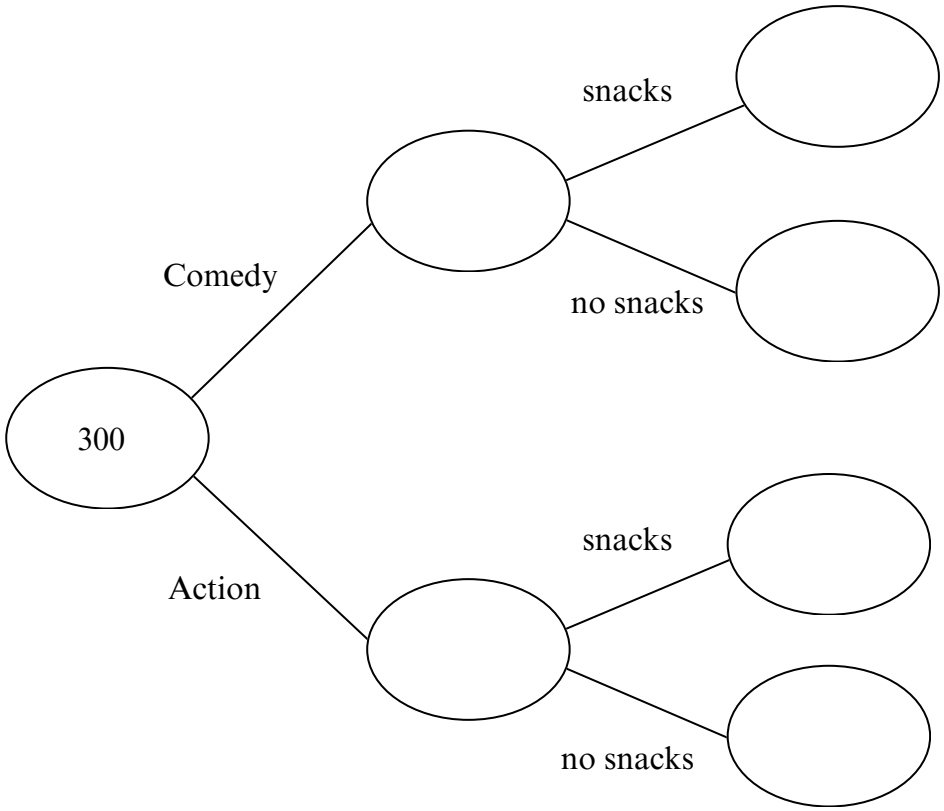
8 300 people attended the cinema.
25% watched a comedy movie.
Of the people who watched an Action movie, three-fifths had snacks.
168 people had snacks in total.

(a) Use this information to complete the frequency tree diagram below. **(3)**



(b) One of the people is chosen at random.
Write down the probability that they watched a comedy movie with no snacks.

.....

(1)

(Total marks for Question 8 is 4 marks)

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9 In a classroom, the ratio of boys to girls is 3 : 5

In the same classroom,
the ratio of students who prefer science to those who prefer art is 7 : 3

(a) Write the ratio of boys to girls in the form 1: n

.....
(1)

(b) Write the fraction of students who prefer art.

.....
(1)

(Total marks for Question 9 is 2 marks)

---

10 Jona has five cards, each card has a number on them.
Three of the cards are hidden.

?	7	?	?	3

The mode of the five numbers is 7.
The mean of the five numbers is 6.
Four of the numbers are prime, and one is cubed.
Work out the three hidden numbers.

..... , ... , ...

(Total marks for Question 10 is 3 marks)

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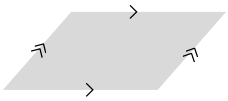
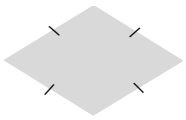
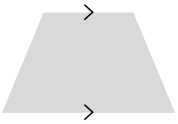
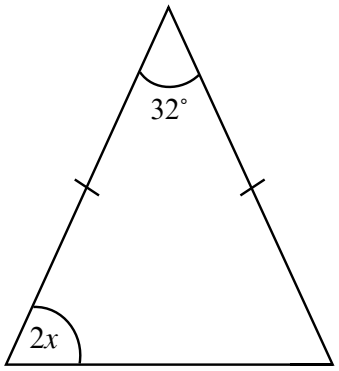
11 Complete the names of these quadrilaterals.

Shape	Name
	.....
	.....
	.....

(Total marks for Question 11 is 3 marks)

12 Here is a triangle.



Work out the value of x.

$x =$ .....

(Total marks for Question 12 is 3 marks)

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13 Here is the recipe to make 16 chocolate brownies.

16 Brownies

4 eggs
0.125kg butter
250g sugar
0.5kg chocolate

Work out how much of each ingredient needed to make 12 brownies.
Give your answers in grams.

eggs .....

butter ..... g

sugar ..... g

chocolate ..... g

(Total marks for Question 13 is 3 marks)

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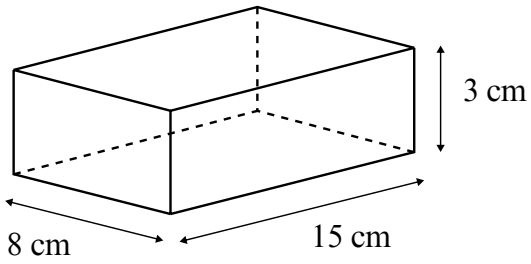
14 Here is a cuboid.



(a) Write down the number of vertices this cuboid has.

.....
(1)

(b) Work out the volume of this cuboid.

.....cm³
(2)

(Total marks for Question 14 is 3 marks)

---

15 Harry has £3,050 saved.
He is going to use 30% of this money to take on holiday.

Harry will need to convert these Pounds (£) into Euros (€).

£1 = €1.17

(a) Work out how many Euros (€) Harry will be taking on holiday.

€.....
(2)

While on holiday, Harry spends €800.

(b) Out of the money he took, work out how many Pounds (£) Harry will have left once he returns home.

£.....
(2)

(Total marks for Question 15 is 4 marks)

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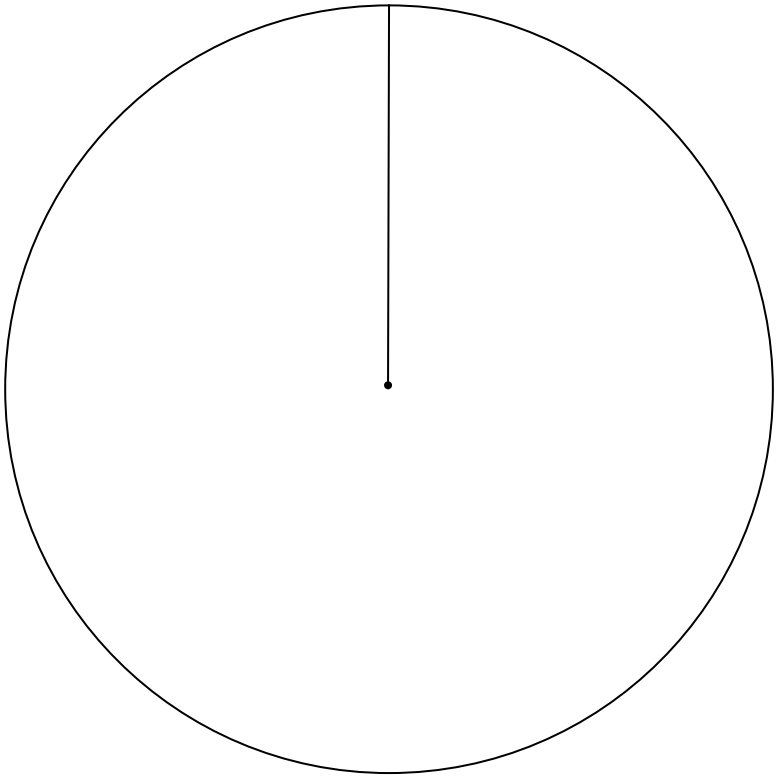
16 The table shows the favourite fruits of a group of 90 students.

Fruit	Frequency
Apple	15
Banana	18
Orange	22
Strawberry	35

Draw an accurate pie chart to represent this information.



(Total marks for Question 16 is 3 marks)

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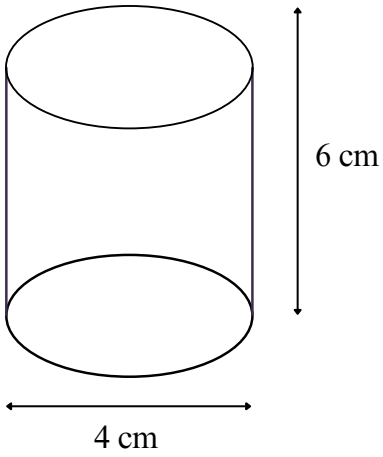
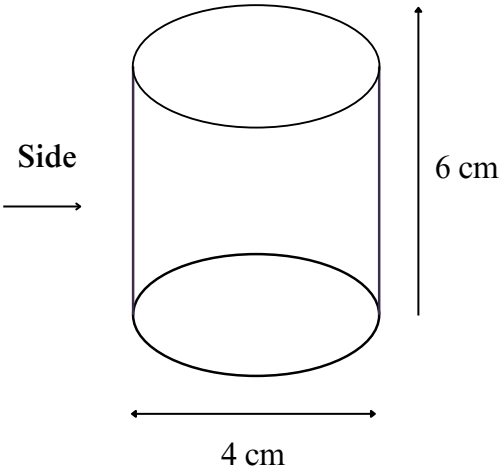
17 (a) On the centimetre grid below, draw a plan view of this cylinder. **(1)**



(b) On the centimetre grid below, draw a side view of this cylinder. **(1)**



(Total marks for Question 17 is 2 marks)

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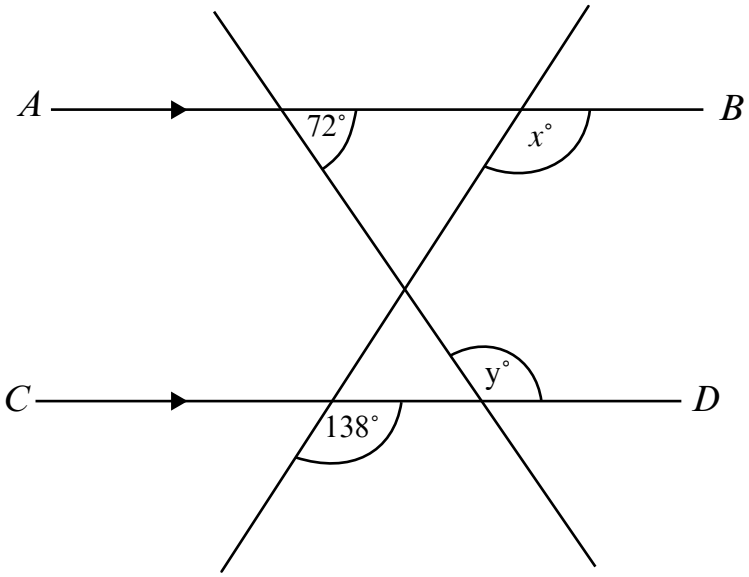
18 AB and BC are parallel lines.

Not drawn accurately



(a) Work out the size of angle x.

°

.....

(1)

(b) Give a reason for your answer.

.....

.....

(1)

(c) Work out the size of angle y.

°

.....

(1)

(d) Give a reason for your answer.

.....

.....

(1)

(Total marks for Question 18 is 4 marks)

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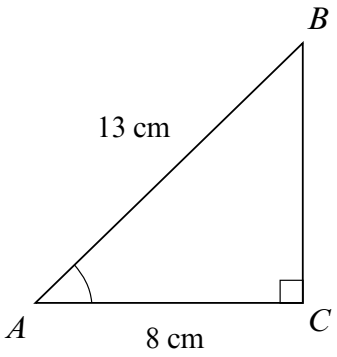
19 Here is a right-angled triangle.

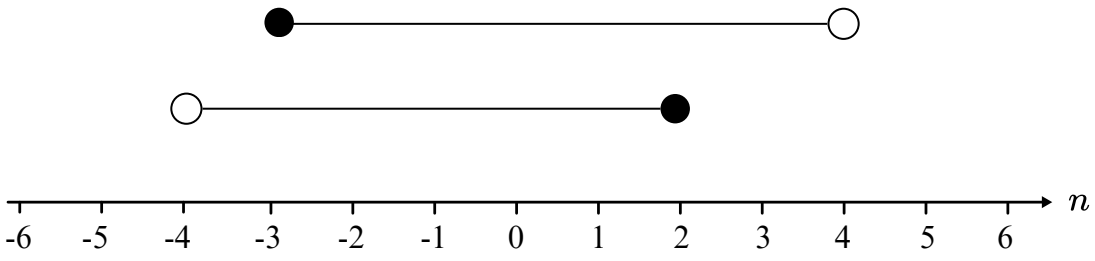


Work out the size of angle BAC

.....°

(Total marks for Question 19 is 2 marks)

20 Here is a number line.



Write the integer values that satisfy both inequalities shown on the number line.

.....

(Total marks for Question 20 is 2 marks)

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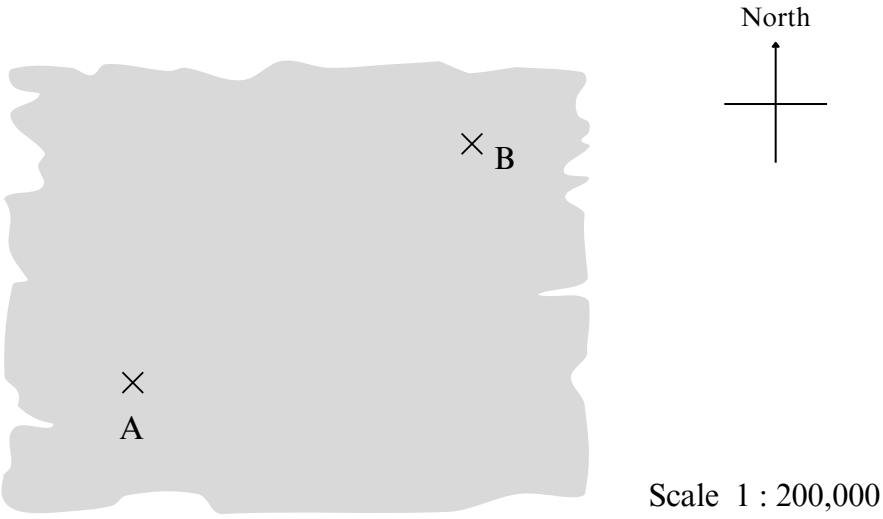
21 Town A and B are shown on a scale map.



(a) Work out the real distance between Town A and B.
Give your answer in metres.

..... m
(2)

(b) Work out the bearing of Town B from A.

°
.....
(2)

(Total marks for Question 21 is 4 marks)

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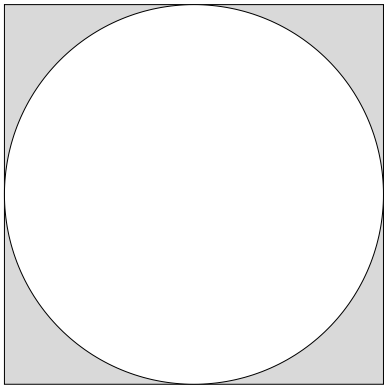
22 Here is a circle inside a square.



The square has a side length of 8 cm.

Work out the area of the shaded region.

Give your answer correct to 1 decimal place.

..... cm^2

(Total marks for Question 22 is 3 marks)

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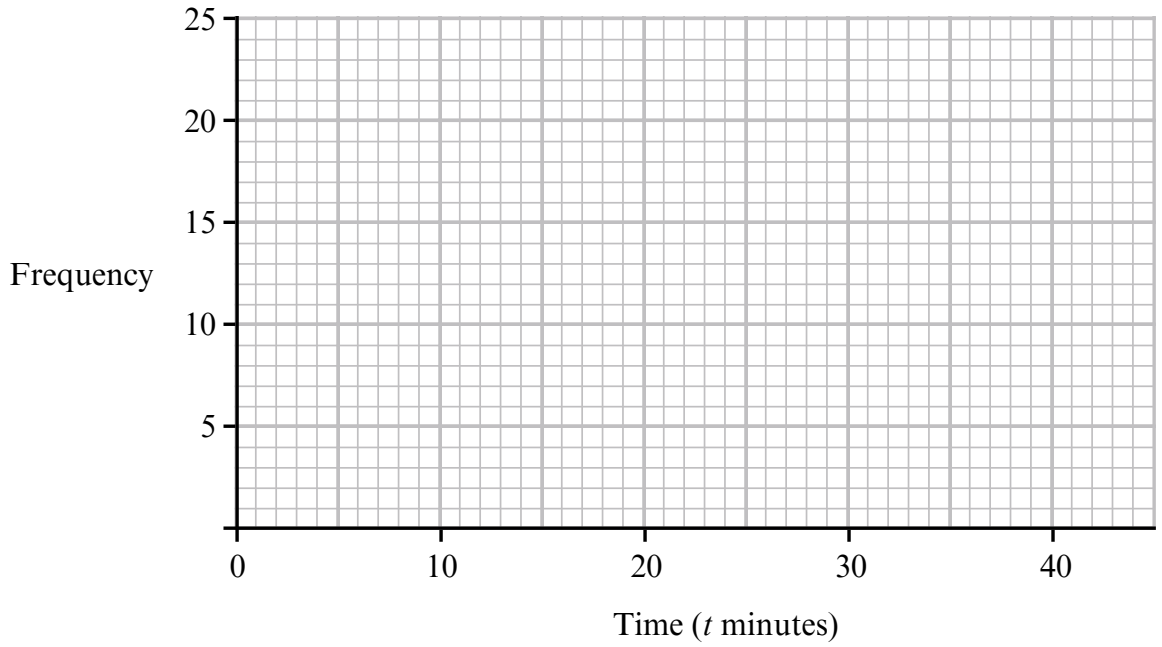
23 The frequency table gives information about the time taken for workers to drive work.

Time (t minutes)	Frequency
$0 < t \leq 10$	5
$10 < t \leq 20$	13
$20 < t \leq 30$	18
$30 < t \leq 40$	4

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



(Total marks for Question 23 is 2 marks)

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24 (a) Write 5×10^{-5} as an ordinary number.

.....

(1)

(b) Write 830×10^{6} in standard form.

.....

(1)

(c) Work out $5.1 \times 10^{5} - 3.1 \times 10^{3}$

Give your answer in standard form.

.....

(2)

(Total marks for Question 24 is 4 marks)

---

25 Given $x : y = 4 : 5$ and $\frac{x}{w} = \frac{7}{3}$

find the ratio $x : y : w$ in its simplest form.

.....

(Total marks for Question 25 is 3 marks)

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26 Henry invests £x in Moomoo Investments for 4 years.
Chloe invests £x in Trading 414 for 2 years.

Moomoo Investments
Compound Interest
3% per annum for the **first** two years 1.8% per annum for each extra year

Trading 414
Compound Interest
5% per annum

At the end of the 4 years, Henry's investment is valued at £54,971.81
Work out the value of Chloe's investment at the end of the 2 years.
Give your answer to the nearest penny.

£.....

(Total marks for Question 26 is 4 marks)

27 (a) Factorise $3x^2 + 12xy$

.....

(1)

(b) $a = 2b + c^2$

Make b the subject.

.....

(2)

(c) Simplify $a^2 \times a \times a^{-5}$

.....

(1)

(d) Simplify $\dfrac{(4wc^3)^3}{8wc}$

.....

(3)

(Total marks for Question 27 is 7 marks)

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28 The number, n, is rounded to 2 decimal places.

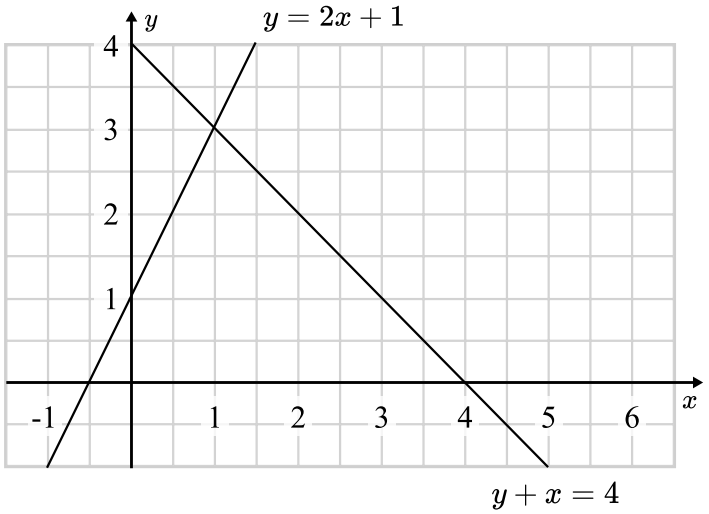
The result is 8.24

Complete the error interval for n.

..... $\leq n <$ .....

(Total marks for Question 28 is 2 marks)

29



Use these graphs to solve the simultaneous equations

$$y = 2x + 1$$

$$y + x = 4$$

$x =$ .....

$y =$ .....

(Total marks for Question 29 is 1 mark)

TOTAL FOR PAPER IS 80 MARKS

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