

Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

I declare this is my own work.

INTERNATIONAL GCSE MATHEMATICS

Core Tier Paper 2C

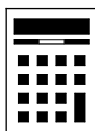
C

Thursday 16 November 2023 07:00 GMT Time allowed: 1 hour 30 minutes

Materials

For this paper you must have:

- a calculator
- mathematical instruments.



Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.
- If your calculator does not have a π button, take the value of π to be 3.142

Advice

Show all necessary working; otherwise marks for method may be lost.

For Examiner's Use

Pages	Mark
2–3	
4–5	
6–7	
8–9	
10–11	
12–13	
14–15	
16–17	
18–19	
20–21	
TOTAL	



N 0 V 2 3 9 2 6 0 2 C 0 1

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9260/2C

Answer **all** questions in the spaces provided.

- 1** The tally chart shows information about the colour of cars in a car park.

Colour	Tally
Red	
Grey	
Black	
White	
Blue	

Which colour is the mode?

[1 mark]

Answer _____

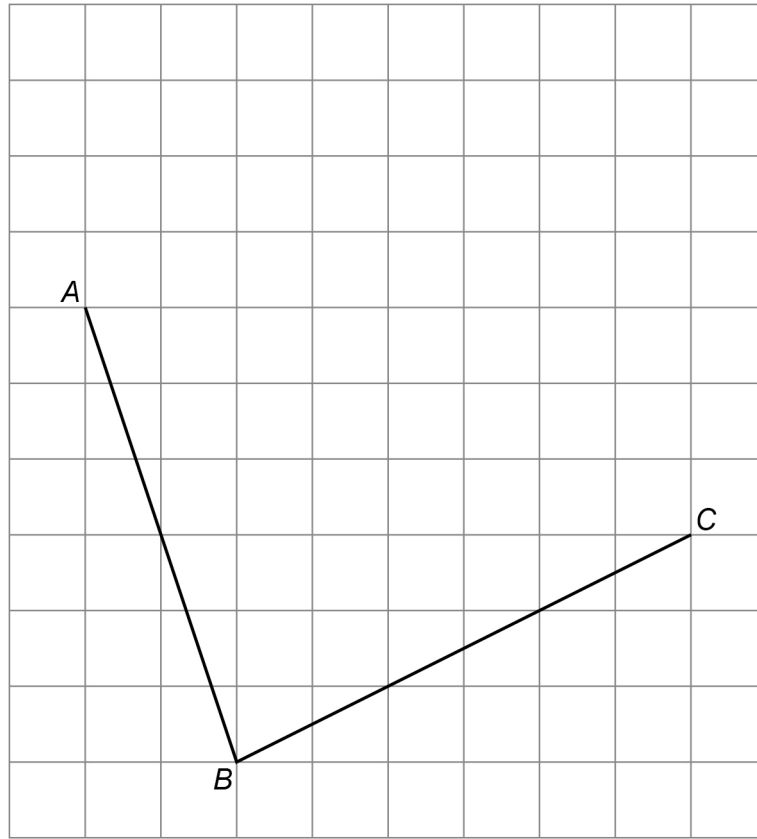
- 2** Complete the table to show equivalent fractions, decimals and percentages.

[3 marks]

Fraction	Decimal	Percentage
$\frac{17}{25}$		68%
$\frac{3}{100}$	0.03	
	1.75	175%



- 3** Points A , B and C are shown on a grid.



- 3 (a)** Measure the acute angle ABC .

[1 mark]

Answer _____ °

- 3 (b)** Line $AD = 4.5$ cm and is parallel to BC .

Using a ruler, draw line AD on the grid.

[2 marks]



4 Here are two tennis items.



Racket
\$38



Bag
\$30

4 (a) Li buys two rackets and one bag.

Work out the total cost.

[2 marks]

Answer \$ _____

4 (b) Jian buys one racket and three boxes of balls.

He pays with four \$20 notes.

His change is \$7.50

Work out the cost of **one** box of balls.

[4 marks]

Answer \$ _____



- 5** The table shows the machines that 20 people were using in a gym.

Rowing	Step	Treadmill
4	7	9

On the grid, draw a bar chart to represent the results.

[4 marks]

Gym machines



- 6** The original length of a rope was 120 cm
Sulin cut pieces of length 11.25 cm from the rope.
When she finished, $\frac{1}{4}$ of the original length remained.
How many pieces did Sulin cut from the rope?
- [4 marks]**

Answer _____



7 Trains leaving R travel to S or T.

7 (a) One day,
17 trains leave R
5 **more** of these trains travel to S than travel to T.

How many of the 17 trains travel to T?

[2 marks]

Answer _____

7 (b) Here is part of a timetable for trains from R to T.

Leave R	Arrive T
14:10	14:55

Trains from R to T take 10 minutes **longer** than trains from R to S.

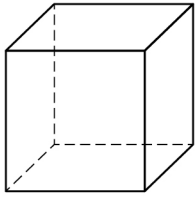
Complete the timetable for this train from R to S.

[3 marks]

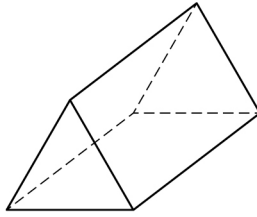
Leave R	Arrive S
	16:15



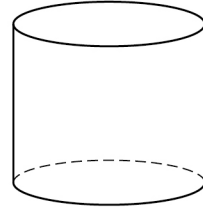
8 Here are five solids.



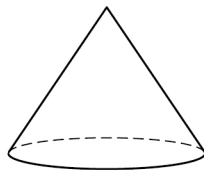
cube



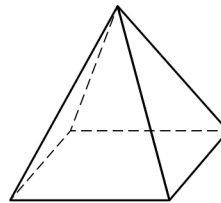
triangular prism



cylinder



cone



pyramid

8 (a) Write down the number of **faces** of a **cube**.

[1 mark]

Answer _____

8 (b) Write down the number of **edges** of a **triangular prism**.

[1 mark]

Answer _____

8 (c) Which **two** of the solids have a **plan** view that is a circle?

[2 marks]

Answer _____ and _____



9

 a and b are **negative** numbers.Tick **one** box for each statement.**[4 marks]**

	Always true	Sometimes true	Never true
$a + b$ is negative	☐	☐	☐
$a \div b$ is negative	☐	☐	☐
$a - b$ is positive	☐	☐	☐
ab is positive	☐	☐	☐

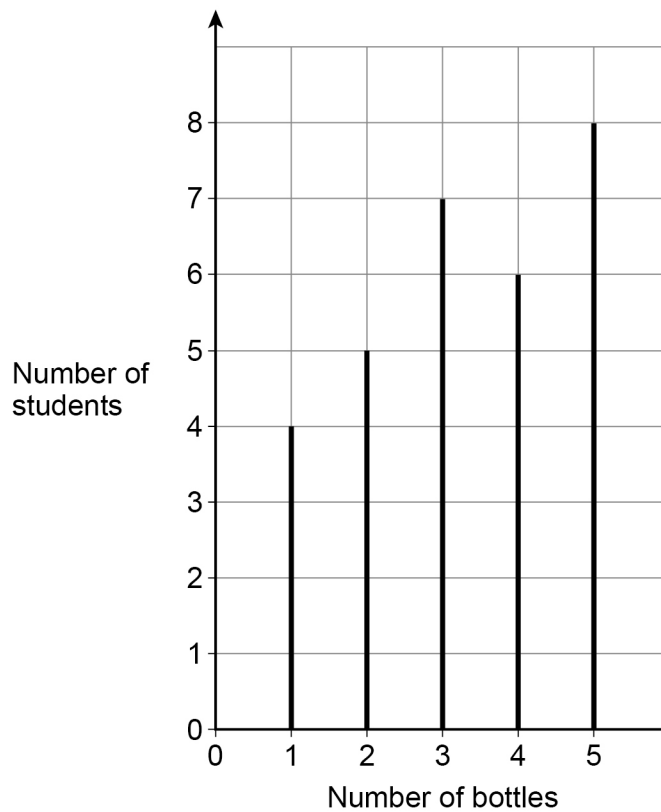
Turn over for the next question

Turn over ►



10

The chart shows the number of bottles of water 30 students bought.



- 10 (a)** Work out the mean number of bottles bought.
Give your answer as a decimal.

[3 marks]

Answer



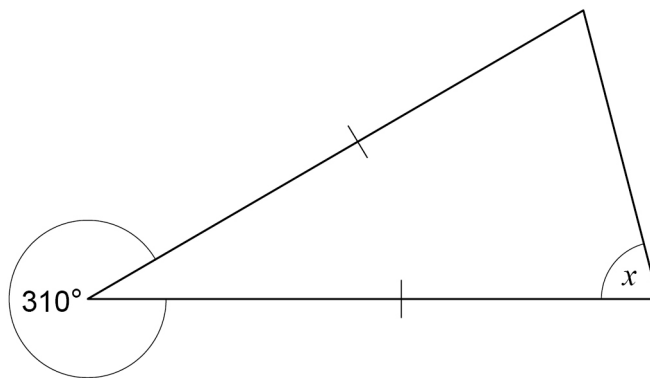
- 10 (b)** One of the students is chosen at random.

Work out the probability that the student bought more than 1 bottle.

[2 marks]

Answer _____

- 11** Here is an isosceles triangle.



Not drawn
accurately

Work out the size of angle x .

[3 marks]

$x =$ _____ °



12 Here is a number pattern.

$$3^2 - 1^2 = (3 + 1) \times 2 = 8$$

$$4^2 - 2^2 = (4 + 2) \times 2 = 12$$

$$5^2 - 3^2 = (5 + 3) \times 2 = 16$$

$$6^2 - 4^2 = (6 + 4) \times 2 = 20$$

12 (a) Write down the next line of the pattern.

[2 marks]

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = (\underline{\hspace{2cm}} + \underline{\hspace{2cm}}) \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

12 (b) Complete this row of the pattern.

[1 mark]

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = (\underline{\hspace{2cm}} + \underline{\hspace{2cm}}) \times \underline{\hspace{2cm}} = 36$$

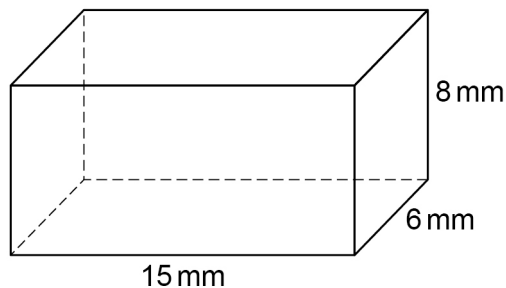


- 12 (c)** A row in the pattern begins $m^2 - n^2$
 The last number in the row is a multiple of 8
 Which of the following statements is true?
 Tick **one** box.

[1 mark]

☐ m and n are both even☐ m and n are both odd☐ m is even and n is odd☐ m is odd and n is even

13



Work out the volume of the cuboid.

State the units of your answer.

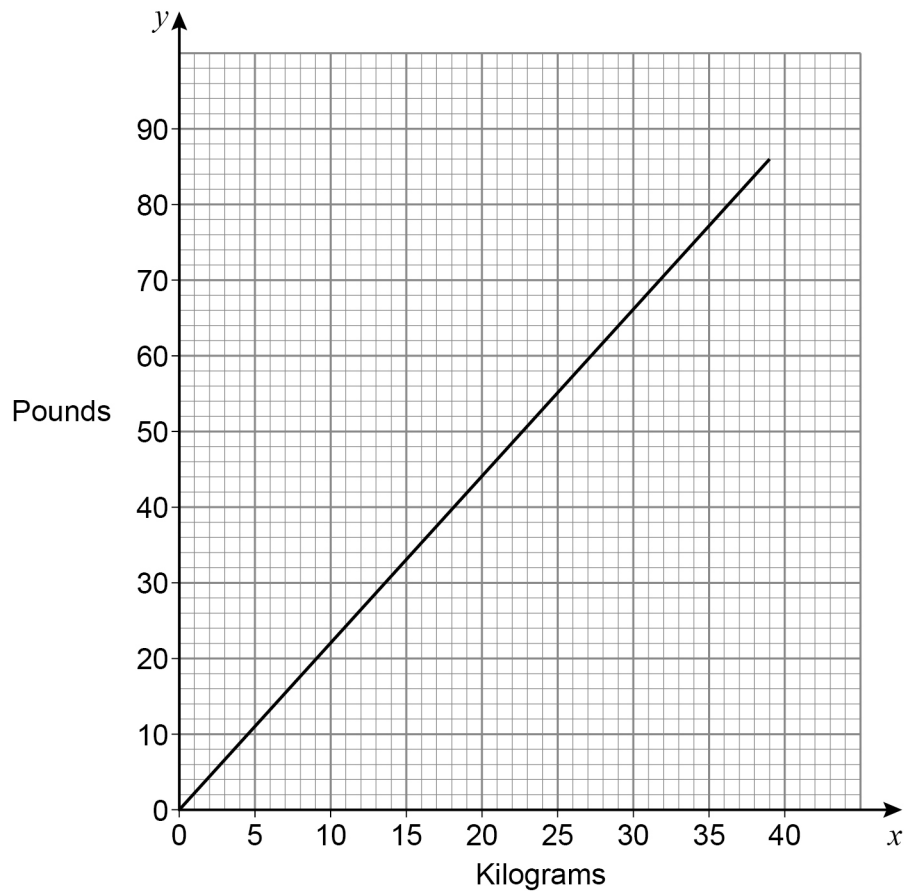
[2 marks]

Answer _____

Turn over ►



- 14** Here is a graph to convert kilograms to pounds.



- 14 (a)** A dog has mass 35 kilograms.

14 pounds = 1 stone

Work out the mass of the dog in **stones**.

[2 marks]

Answer _____ stones



- 14 (b)** The formula to convert kilograms (x) to pounds (y) is $y = Ax$ where A is a constant.

Use the graph to work out the value of A .

[2 marks]

Answer _____

- 15 (a)** Is 8×10^5 greater than $\frac{3}{4}$ of a million?

You **must** show your working.

[2 marks]

- 15 (b)** Half of a number is 9×10^{-2}

Work out the number.

Give your answer in standard form.

[2 marks]

Answer _____



Here are expressions for the masses, in kilograms, of three boxes, A, B and C.

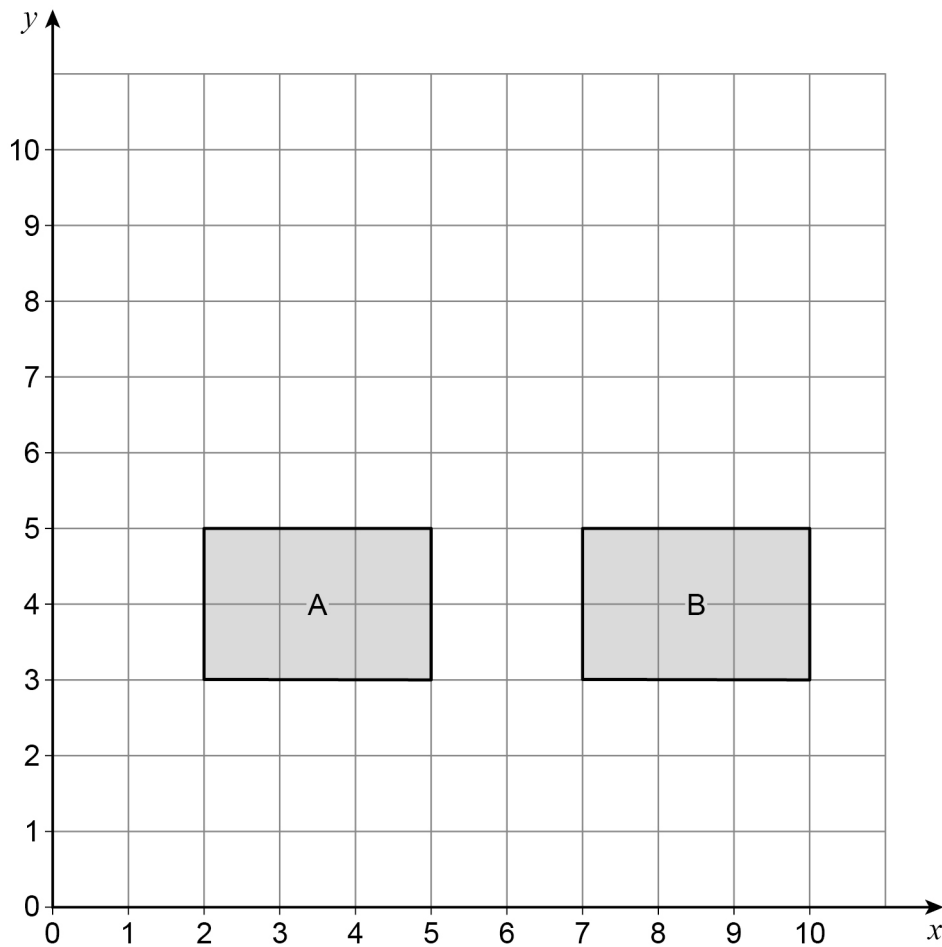
 $x + 5$

[4 marks]

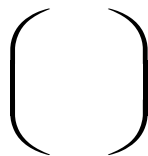
This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings on the paper.

17

Shapes A and B are shown on the grid.

Complete each **single** transformation that maps shape A to shape B.**[3 marks]**

Translation by the vector



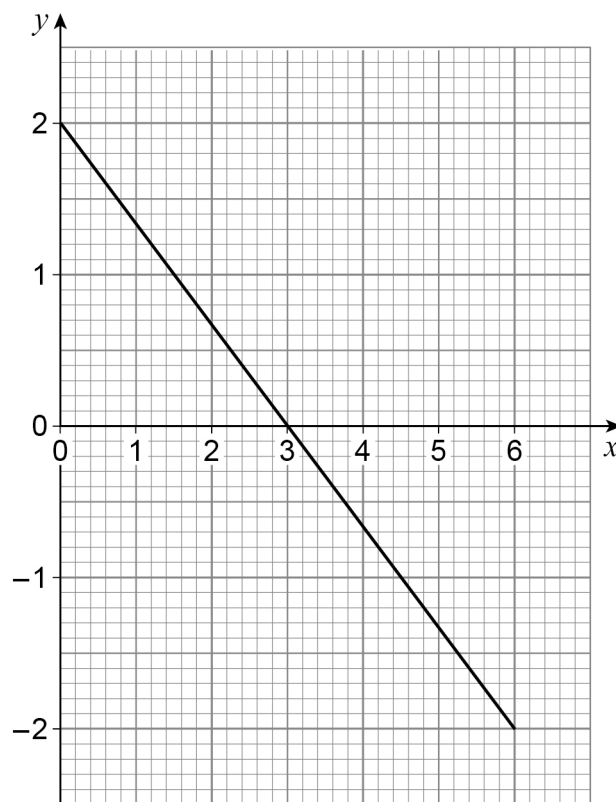
Reflection in the line with equation _____

Rotation _____° about (_____, _____)

Turn over ►



- 18** Here is the graph of $y = 2 - \frac{2}{3}x$ for values of x from 0 to 6



- 18 (a)** On the same grid, draw the graph of $y = \frac{1}{2}x - 1$ for values of x from 0 to 6

[3 marks]

- 18 (b)** Use the graphs to estimate the values of x and y where

$$y = 2 - \frac{2}{3}x \quad \text{and} \quad y = \frac{1}{2}x - 1$$

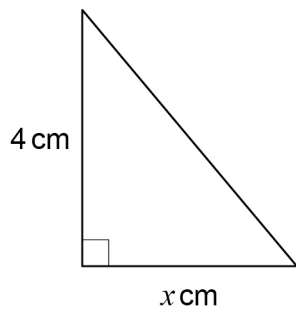
[2 marks]

$x =$ _____ $y =$ _____

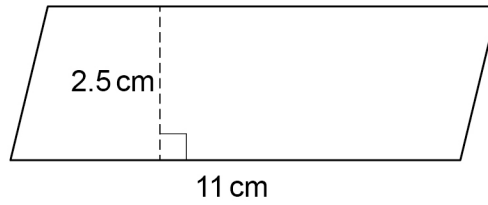


19

The area of the triangle is $\frac{3}{5}$ of the area of the parallelogram.



Not drawn
accurately



Work out the value of x .

[4 marks]

$x =$ _____

Turn over for the next question



20

An experiment has four possible results, A, B, C or D.

The table shows some of the relative frequencies after a number of trials.

Result	A	B	C	D
Relative frequency	0.21	0.15		

20 (a)

C was the result twice as often as A.

Work out the relative frequency of D.

[3 marks]

Answer _____

20 (b)

In the next 600 trials, how many times would you expect the result to be A or B?

[2 marks]

Answer _____



21

A graph has the equation $y = x^2 + kx + k$ where k is a constant.

The graph passes through the point (2, 19)

Work out the value of y when $x = 3$

[3 marks]

$y =$ _____

END OF QUESTIONS

There are no questions printed on this page

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outside the
box*

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**



[illegible]

