



Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

\_\_\_\_\_

Forename(s)

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Candidate signature

\_\_\_\_\_

I declare this is my own work.

# GCSE MATHEMATICS

# F

Foundation Tier Paper 2 Calculator

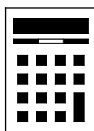
Wednesday 4 June 2025

Morning Time allowed: 1 hour 30 minutes

## Materials

For this paper you must have:

- a calculator
- mathematical instruments
- the Formulae Sheet (enclosed).



## 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.

## Advice

In all calculations, show clearly how you work out your answer.

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        |      |
| 22–23        |      |
| 24           |      |
| <b>TOTAL</b> |      |



J U N 2 5 8 3 0 0 2 F 0 1

IB/M/Jun25/G4010/E7

8300/2F

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

Do not write  
outside the  
box

**1 (a)** Solve  $w + 8 = 19$

**[1 mark]**

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$w =$  \_\_\_\_\_

**1 (b)** Solve  $3x = 24$

**[1 mark]**

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$x =$  \_\_\_\_\_

**1 (c)** Solve  $20 - y = 7$

**[1 mark]**

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$y =$  \_\_\_\_\_



- 2** The **only** animals in a field are sheep and cows.  
The ratio sheep : cows = 31 : 47  
There are fewer than 100 animals in the field.

- 2 (a)** Write down the number of **cows** in the field.

[1 mark]

Answer \_\_\_\_\_

- 2 (b)** **In total**, how many animals are there in the field?

[1 mark]

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Answer \_\_\_\_\_

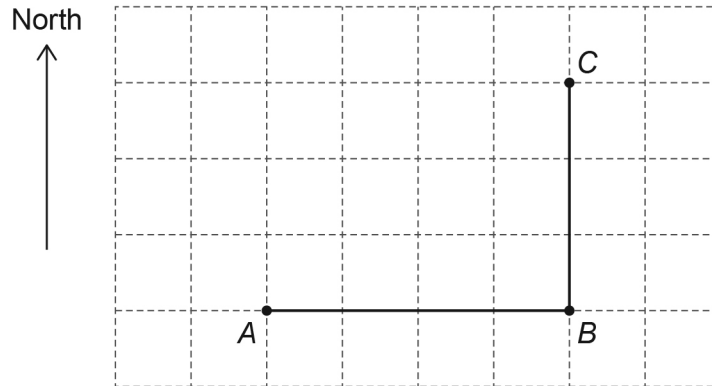
Turn over for the next question



- 3 A path joins points A, B, and C.

The scale drawing shows the path on a centimetre grid.

**Scale:** 1 centimetre represents 10 metres



- 3 (a) Write down the direction of B from A.

[1 mark]

Answer \_\_\_\_\_

- 3 (b) Work out the **actual** distance along the path from A to C.

[2 marks]

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Answer \_\_\_\_\_ metres



4 (a) Simplify  $a \times b$

[1 mark]

Answer \_\_\_\_\_

4 (b) Simplify fully  $c + c + c$

[1 mark]

Answer \_\_\_\_\_

4 (c) Simplify fully  $p \times p \times p$

[1 mark]

Answer \_\_\_\_\_

4 (d) Simplify  $d \div d$

[1 mark]

Answer \_\_\_\_\_

Turn over for the next question



**5**

Jenny walks

- 400 metres to the shop
- 250 metres to the park
- 380 metres home.

Show that Jenny walks more than 1 kilometre.

**[2 marks]**

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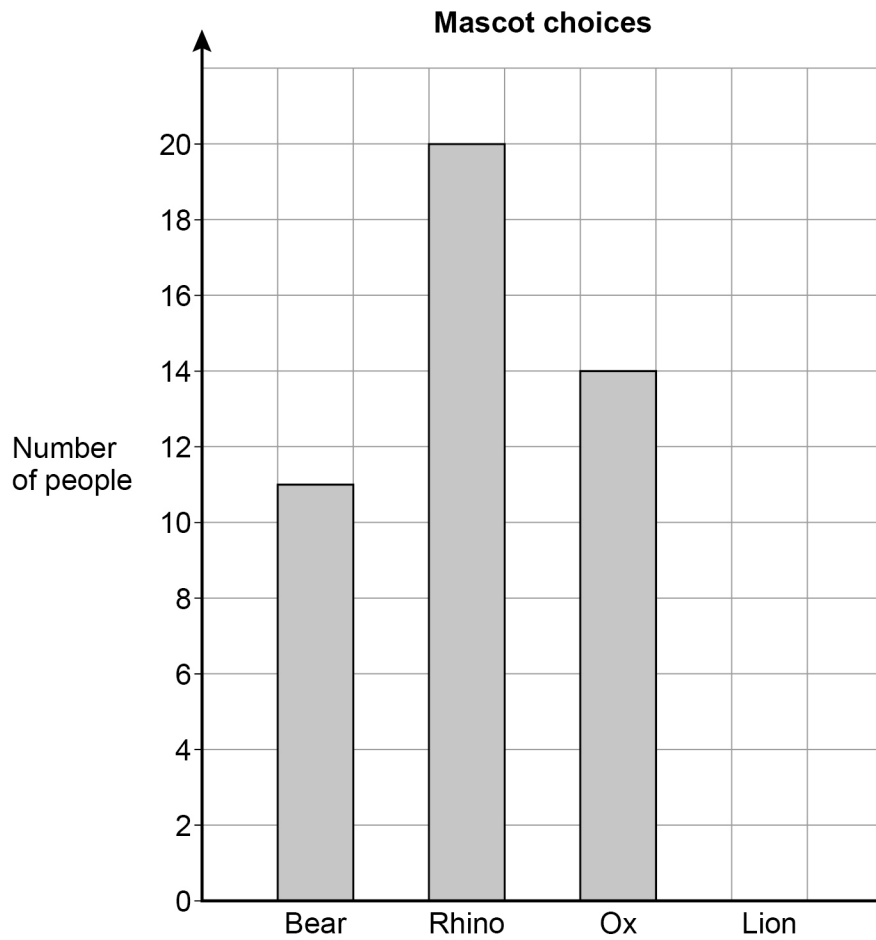
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6

50 people choose a mascot for a team.

The bar chart shows some information about their choices.



The **50** people each choose one of bear, rhino, ox or lion.

Complete the bar chart.

**[4 marks]**

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- 7** Work out 80p as a fraction of £1  
Give your answer in its simplest form.

**[2 marks]**

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Answer \_\_\_\_\_

- 8 (a)** Convert  $3\frac{1}{2}$  hours to minutes.

**[1 mark]**

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Answer \_\_\_\_\_ minutes

- 8 (b)** Convert 1400 grams to kilograms.

**[1 mark]**

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Answer \_\_\_\_\_ kilograms

- 8 (c)** Convert 32 kilometres to miles.  
Use 8 kilometres = 5 miles

**[2 marks]**

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Answer \_\_\_\_\_ miles



- 9 The table shows information about two workers on one day.

|        | Total working time<br>(hours) | Working time spent online<br>(minutes) |
|--------|-------------------------------|----------------------------------------|
| Zeke   | 8                             | 200                                    |
| Margot | 4                             | 110                                    |

- 9 (a) Margot started work at 10:30am  
What time did she finish?

[1 mark]

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Answer \_\_\_\_\_

- 9 (b) Zeke says he spent **more than one quarter** of his total working time online.  
Is he correct?

[3 marks]

Tick a box.

Yes

☐

No

☐

Show working to support your answer.

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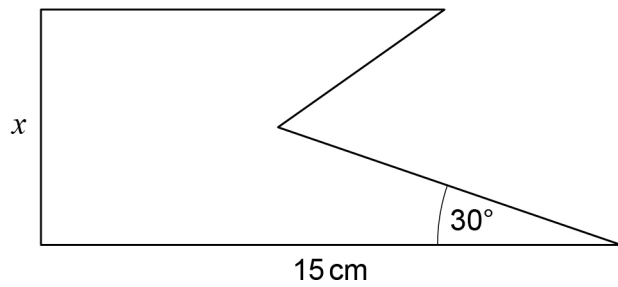
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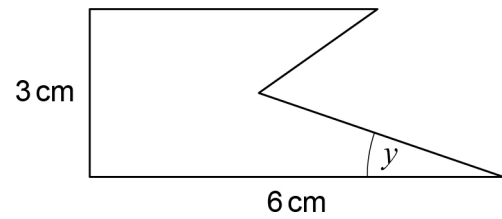
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**10** These two shapes are similar.



Not drawn  
accurately



**10 (a)** Write down the value of  $y$ .

**[1 mark]**

$y =$  \_\_\_\_\_  $^{\circ}$

**10 (b)** Work out the value of  $x$ .

**[2 marks]**

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$x =$  \_\_\_\_\_ cm



**11** Here are two expressions, A and B.

**A**

$$7(x - 2) + 4x + 6$$

**B**

$$5(3x + 2) - 4x - 18$$

Show that A and B are equivalent.

**[3 marks]**

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**12** 4 apples cost £2.20

Work out the cost of 7 of these apples.

**[2 marks]**

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Answer £ \_\_\_\_\_



**13** Ingrid records the number of minutes she uses her mobile phone over four weeks.

140      168      205      192

**13 (a)** Work out the range.

**[1 mark]**

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Answer \_\_\_\_\_ minutes

**13 (b)** Ingrid records the number of minutes for a fifth week.

The mean for all **five** weeks is 178 minutes.

Work out the number of minutes used in the fifth week.

**[3 marks]**

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Answer \_\_\_\_\_ minutes



14

Match each description to the correct expression.

One has been done for you.

[4 marks]

$2n$

2 more than  $n$ 

$n + 2$

 $n$  doubled

$\sqrt{n}$

 $n$  multiplied by itself

$\frac{n}{2}$

half of  $n$ 

$n - 2$

2 less than  $n$ 

$n^2$

$2 - n$

Turn over ►



15

A rectangle has

- an area of  $60 \text{ cm}^2$
- a side length of  $10 \text{ cm}$

Warren says,

“The perimeter of the rectangle is  $32 \text{ cm}$  because  $60 \div 10 = 6$ ”

Is Warren correct?

Tick a box.

Yes

☐

No

☐

Show working to support your answer.

[1 mark]

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16

Rearrange  $a + 3 = b$  to make  $a$  the subject.

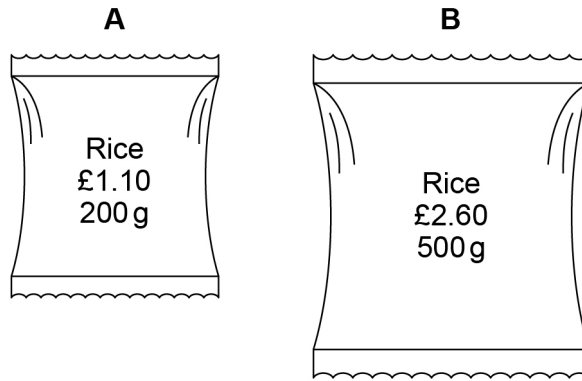
[1 mark]

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 $a =$  \_\_\_\_\_

17



Which packet of rice is better value for money?

Tick a box.

A ☐

B ☐

You **must** show your working.

[3 marks]

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- 18 (a)** Sam uses either the bus or the train to get to work.

$$\frac{\text{number of days using bus}}{\text{number of days using train}} = \frac{1}{8}$$

Write down the ratio    number of days using bus : number of days using train

**[1 mark]**

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Answer \_\_\_\_\_ :

- 18 (b)** Write the ratio     $6a : 5a$     in the form  $n : 1$  where  $n$  is a **decimal**.

**[2 marks]**

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Answer \_\_\_\_\_ : 1

- 18 (c)**  $1 : x = x : 4$

Work out the value of  $x$

**[1 mark]**

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$x =$  \_\_\_\_\_



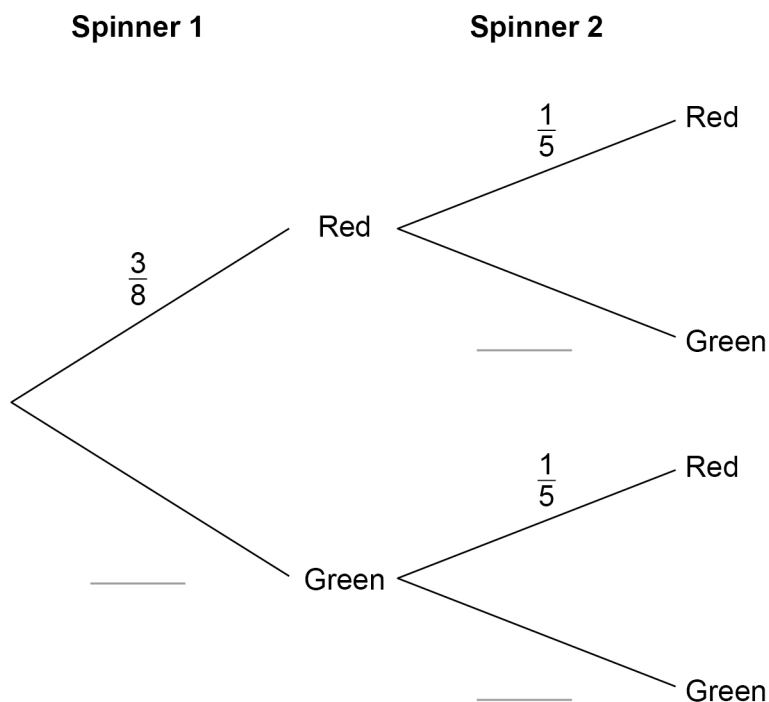
- 19** Two spinners each have only red sections and green sections.

Spinner 1  $P(\text{red}) = \frac{3}{8}$

Spinner 2  $P(\text{red}) = \frac{1}{5}$

- 19 (a)** Complete the tree diagram.

[2 marks]



- 19 (b)** Both spinners are spun.

Work out the probability that **both** spinners land on red.

[1 mark]

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Answer \_\_\_\_\_



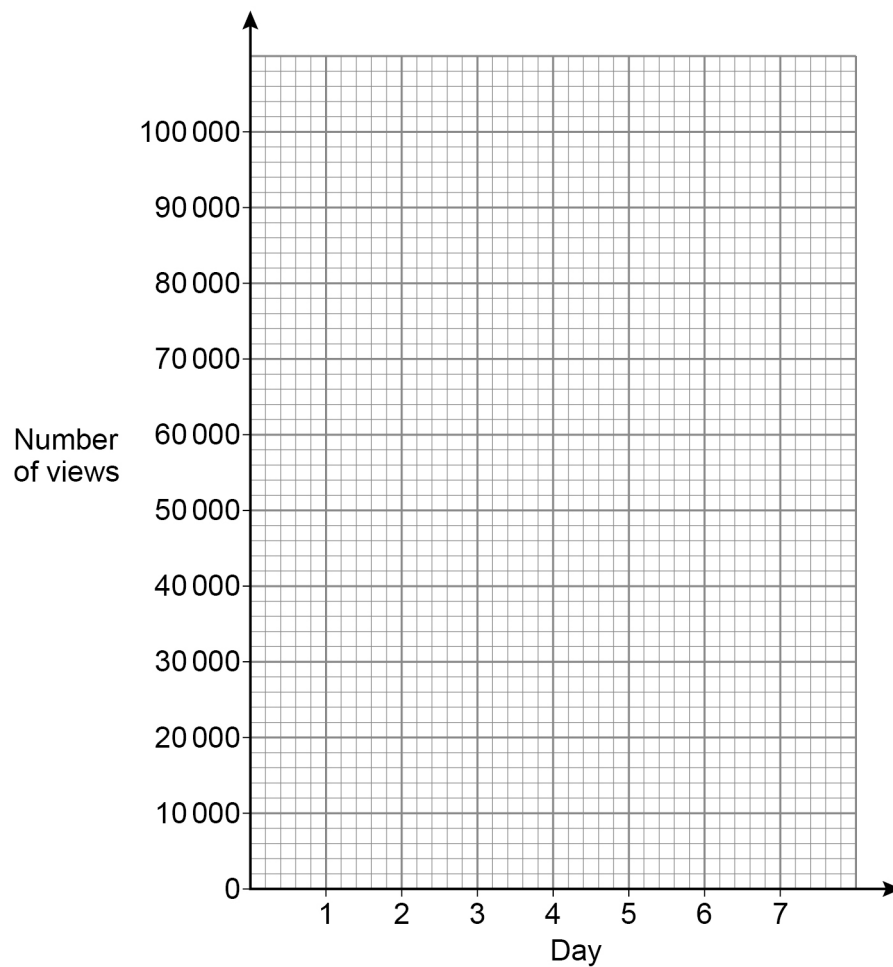
**20**

Youssuf posted an advert on his social media channel.

The table shows the number of views of the advert during its first 6 days.

| Day             | 1      | 2      | 3      | 4      | 5      | 6      |
|-----------------|--------|--------|--------|--------|--------|--------|
| Number of views | 49 000 | 95 000 | 87 000 | 77 000 | 64 000 | 48 000 |

**20 (a)** On the grid, draw a time series graph to represent the data.

**[2 marks]**

- 20 (b)** Youssuf receives 0.018p for each view of the advert.  
Estimate how much he receives from views of the advert on **day 7**

**[3 marks]**


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Answer £ \_\_\_\_\_

- 21** 70% of the discs in a box are red and the rest are blue.

- 40% of the red discs are removed.
- 50% of the blue discs are removed.

In total, what percentage of the discs are removed from the box?

**[3 marks]**


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Answer \_\_\_\_\_ %



**22**

A group of adults and students go to a theme park.

Here are the prices.

|                                      |        |
|--------------------------------------|--------|
| Adult                                | £24.50 |
| Student                              | £16.25 |
| One adult free with every 5 students |        |

In the group there are 48 students.

The total price for the group is £927

How many adults are in the group?

**[4 marks]**

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Answer \_\_\_\_\_



- 23 (a)** The length of a fence panel is 160 cm to the nearest 10 cm

Complete the error interval.

**[2 marks]**

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Answer \_\_\_\_\_ cm  $\leq$  length < \_\_\_\_\_ cm

- 23 (b)** A different fence panel measures 2 metres to the nearest 10 cm

Kim says that the total length of **three** of these fence panels must be less than 6.2 m

Show that Kim is correct.

**[2 marks]**

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- 24** Circle the expression which is a factor of  $3x + 15$

**[1 mark]**

$3x$

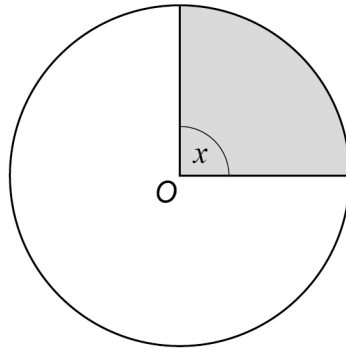
$x + 12$

$x + 5$

$x + 15$



**25** Here is a circle, centre O.



Not drawn  
accurately

**25 (a)** The circle has a circumference of 20 cm

Assume that angle  $x$  is  $90^\circ$

Work out the shaded area.

Give your answer as a decimal.

**[3 marks]**

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Answer \_\_\_\_\_  $\text{cm}^2$



**25 (b)** In fact, angle  $x$  is smaller than  $90^\circ$

What does this mean about the shaded area?

Tick **one** box.

**[1 mark]**

☐

It is smaller than the answer to part (a)

☐

It is the same as the answer to part (a)

☐

It is larger than the answer to part (a)

☐

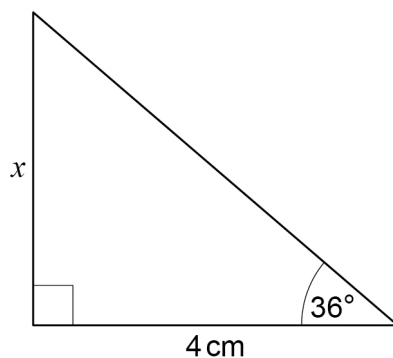
It could be any of the above

**Turn over for the next question**

**Turn over ►**



26

Not drawn  
accurately

Use trigonometry to work out the value of  $x$ .

You **must** show your working.

**[3 marks]**

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$x =$  \_\_\_\_\_ cm

**END OF QUESTIONS**