



THIRD SPACE
LEARNING

Mathematics

Paper 1

(Non-Calculator)

Foundation Tier

AQA GCSE

SET 3

Mathematics Paper 1 (Non-Calculator) Foundation Tier AQA

GCSE SET 3

Name

Total marks



Paper length: 1hr 30mins

Instructions

- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.
- You must show all your working.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- Calculators may not be used.

Information

- The total mark for this paper is 80
- The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Question	Mark
1	
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You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

This practice paper is based on the topics from the **advanced information for the November 2024 exam series**.

Please note, this practice paper is an example to help revision, these topics can be tested in other ways and other topics may be included in the actual papers

- 1 Write the decimal that is equivalent to $\frac{7}{10}$

[1 mark]

Answer _____

- 2 Round 3372 to the nearest hundred.

[1 mark]

Answer _____

- 3 Simplify fully the expression $b + 7b - 3b$

[1 mark]

Answer _____

- 4 Work out $-16 - 3$

[1 mark]

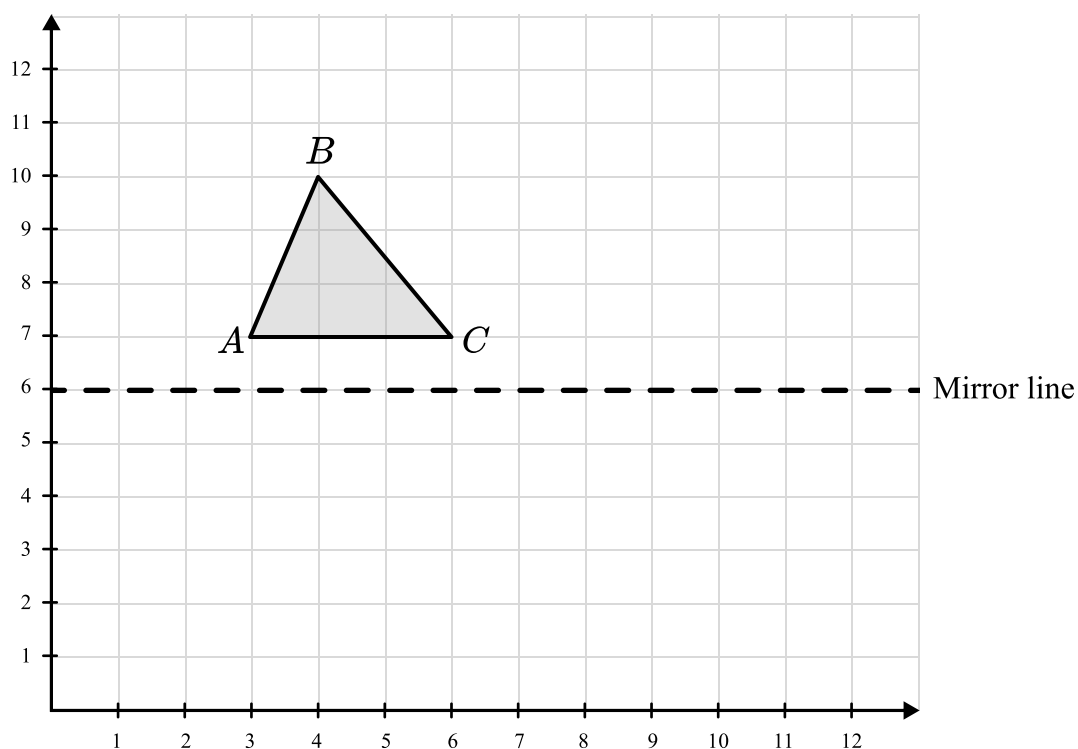
Answer _____

5 Convert 45 centimetres into millimetres.

[1 mark]

Answer _____

6 The shaded triangle below is reflected in the mirror line.



Write down the coordinates of point *B* after the reflection.

[1 mark]

Answer (_____ , _____)

7 (a) Jordan earns £240 during May.

He spends $\frac{1}{2}$ of his money on clothes.

He spends £30 on food.

What fraction of his money does Jordan have left?

[3 marks]

Answer _____

(b) Jordan buys 3 t-shirts, 6 pairs of shorts and 1 jumper.

Write down the ratio of

shorts : other clothing

that Jordan buys.

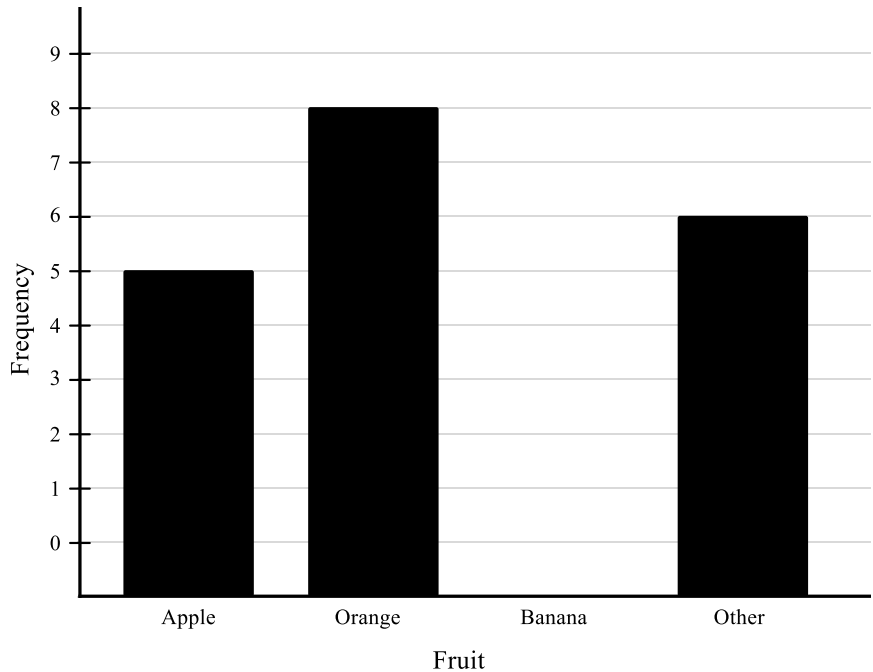
Give your answer in its simplest form.

[2 marks]

Answer _____

8 There are 28 students in Katie’s class.
On Monday, each student brought one piece of fruit as a snack.
Katie recorded the fruit that each student brought.

This chart shows Katie’s results. One bar is missing.



Use the chart to work out whether more students brought an apple or a banana,
and how many more brought that type of fruit.

[3 marks]

Complete the following sentence.

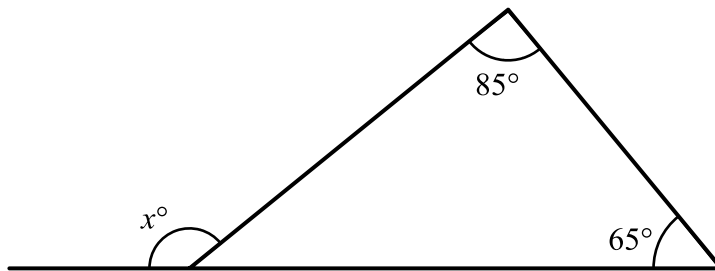
more students brought _____ than _____ .

- 9 By rounding each number to the nearest 10, estimate the value of 62×38.5

[2 marks]

Answer _____

- 10 Here is a triangle. One line is extended.



Work out the size of angle x .

[2 marks]

Answer _____ °

11 Here is some information about the minimum and maximum temperatures in Finland last year.

	Minimum	Maximum
January	-13°C	-6°C
June	6°C	

(a) The maximum temperature in June was 21°C warmer than the maximum temperature in January.

What was the maximum temperature in June?

[2 marks]

Answer _____ $^{\circ}\text{C}$

(b) Fiona visited Finland in 2023.

During her visit, the temperature was -10°C .

Did Fiona visit Finland in January or June?

Give a reason for your answer.

[2 marks]

She visited in _____

Reason: _____

12 (a) Work out $\frac{3}{4} - \frac{5}{8}$

[2 marks]

Answer _____

(b) Work out $\frac{2}{7} \times \frac{3}{10}$

Give your answer as a fraction in its simplest form.

[2 marks]

Answer _____

13 Nia flips a biased coin. The probability the coin lands on heads is 0.3.

(a) Write down the probability that the coin lands on tails.

[1 mark]

Answer _____

Nia flips the coin 200 times.

(b) Work out an estimate for the number of times the coin will land on heads.

[2 marks]

Answer _____

- 14** The cost of 3 adult tickets for the cinema is £18.
The cost of 2 adult tickets and 5 child tickets is £28.50.

Work out the cost of 4 adult tickets and 2 child tickets.
You must show all your working.

[4 marks]

Answer _____

- 15** Travis is asked to expand and simplify $3(2p + 7) + 4(3p - 2)$

Travis writes:

$$3(2p + 7) + 4(3p - 2) = 5p + 21 + 12p + 8$$

Write down 2 mistakes that Travis has made.

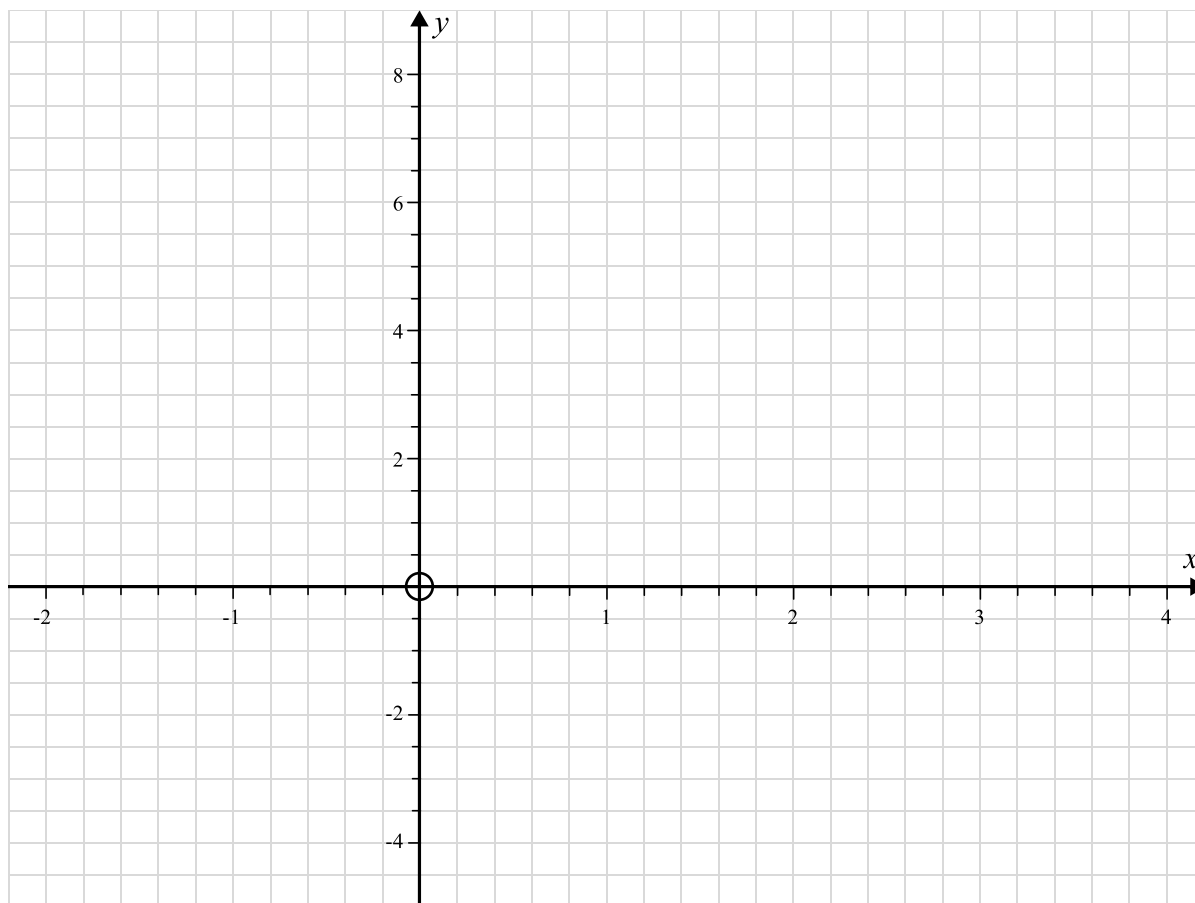
[2 marks]

Mistake 1:

Mistake 2:

16 Draw the graph of $y = 4 - 2x$ for the values of x from -2 to 4 .

[3 marks]



17 $221 \times 35 = 7735$

Use this to determine the value of 2.21×350

[1 mark]

Answer _____

18 Solve $7x - 2 = 3x + 14$

[3 marks]

$x =$ _____

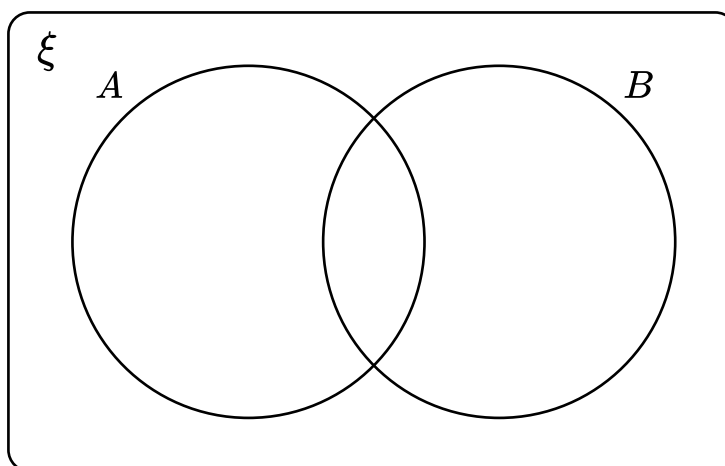
19 $\xi = \{2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$

$A = \{\text{even numbers}\}$

$B = \{\text{prime numbers}\}$

Complete the Venn diagram for this information.

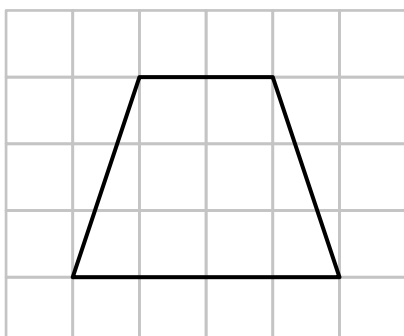
[3 marks]



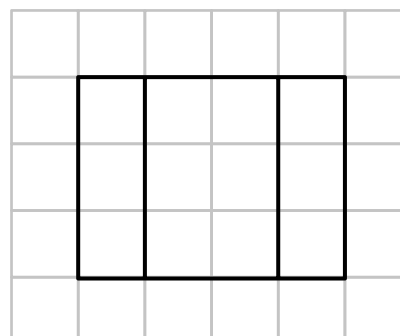
20 Shown are the front elevation and plan of a solid shape, drawn on centimetre grids.

[2 marks]

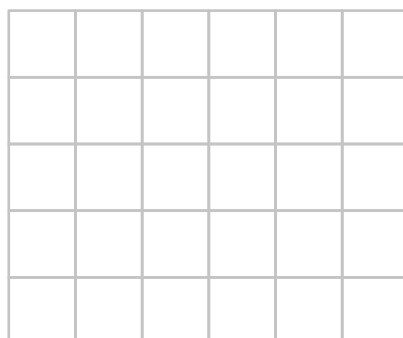
Front elevation



Plan



On the centimetre grid below, draw the side elevation of the solid shape.



- 21** Stacey buys 300 glow sticks for £40.
Stacey sells all of the glow sticks. She charges 50p for 3 glow sticks.
Calculate Stacey's percentage profit.

[4 marks]

Answer _____

- 22** Write 208 as a product of its prime factors.

[2 marks]

Answer _____

23 (a) The term to term rule for a sequence is

divide by 4

The 3rd term of the sequence is 11.5

Work out the 1st term

[3 marks]

Answer _____

(b) Here are the first 5 terms of a different sequence.

2 7 12 17 22

Put a tick next to the correct statement:

[1 mark]

This is an arithmetic progression	
This is a geometric progression	
This is a Fibonacci sequence	
We are unable to tell what type of sequence this is	

(c) In another sequence, the next term is made by adding the previous two terms.

Which of these sequences follows this rule?

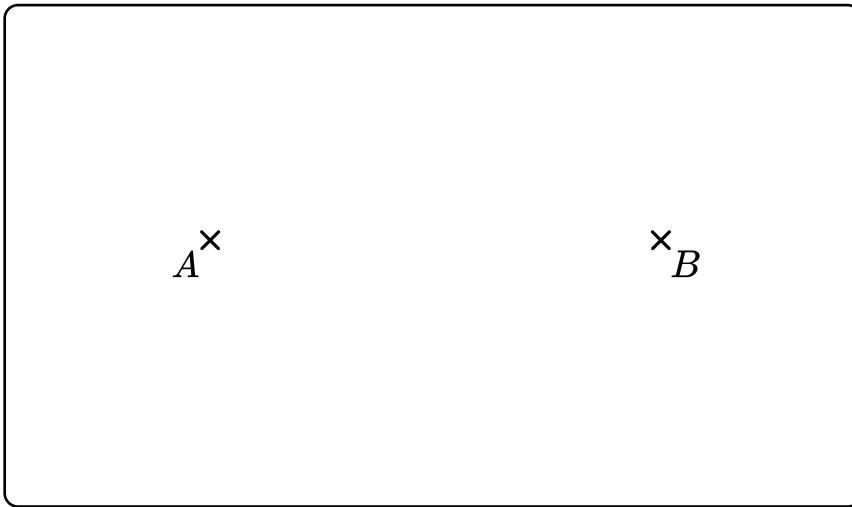
Circle your answer.

[1 mark]

A -3 2 -1 3 -2	B -5 3 -2 1 -1
C -4 1 3 5 7	D -2 -2 -4 2 -2

24 The diagram shows the position of two phone masts.

The scale of the diagram is 1 cm represents 20 m .



Lydia lives between two phone masts, A and B .

Lydia lives closer to mast A than mast B , but still within 80 m of mast B .

On the diagram, shade the area where Lydia could live.

Show all of your construction lines.

[3 marks]

25 Write these numbers in order of size.

Start with the smallest.

[2 marks]

$$3.65 \times 10^5$$

365

$$36.5 \times 10^{-2}$$

0.0365

Smallest

Largest

26 In a football team there are 6 boys and 4 girls. The mean height of the boys is 130cm and the mean height of the girls is 120cm .

Tiami says the mean height of all the players is 126cm .

Is Tiami correct?

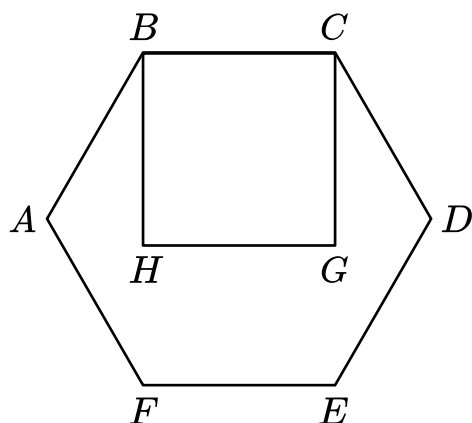
You must show how you decide.

[4 marks]

Answer _____

27 $ABCDEF$ is a regular hexagon.

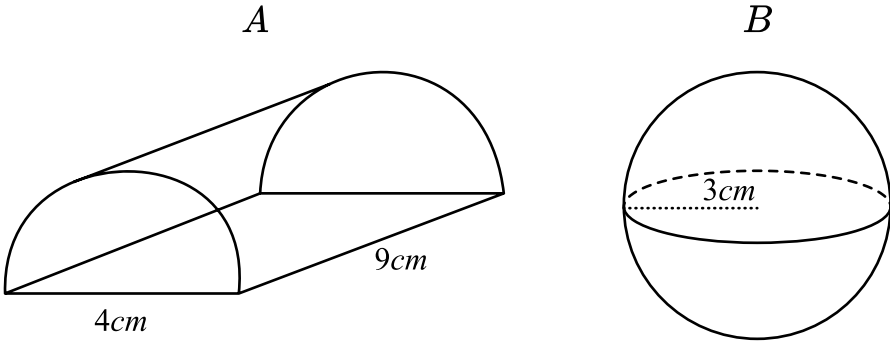
$BCGH$ is a square.



Show that $\text{angle } BHG = 3 \times \text{angle } ABH$.

[4 marks]

28 Here are two shapes, *A* and *B*.



Not drawn
accurately

Volume of a Cylinder: $V = \pi r^2 h$

Volume of a Sphere: $V = \frac{4}{3} \pi r^3$

How many times bigger is the volume of shape *B* than the volume of shape *A*?
You must show your working.

[4 marks]

Answer _____

29 What is the exact value of $\cos(60)$?

[1 mark]

Answer _____

30 (a) Evaluate $\frac{5^7}{5^4}$.

[2 marks]

Answer _____

(b) Given that $a = 4b^3$ and $b = m^2$, write an expression for a in terms of m .

Give your answer in its simplest form.

[2 marks]

Answer _____

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