



Class Maths

Video Solutions



PRACTICE PAPER FOR

AQA Paper 3F (June 2025)

----- Disclaimer -----

This paper has been created based on the **most common** paper 3 topics from previous years and also careful analysis of what topics have already appeared in paper 1/2. The paper should be excellent at helping students revise for exams, however should not be relied upon as the basis for revision. The topics from this paper may well appear in the real exams, however there is absolutely no guarantee of this. Some topics may appear, some may not. Anybody giving you any sort of guarantee is misleading you. If any topics or questions from this paper do come up, this is just lucky guessing and nothing more. ☺

Ultimately the best way to prepare for the exams is to **revise all topics**.

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

1 (a) Work out the value of 22^2 [1 mark]

Answer _____

1 (b) Work out the value of $\sqrt{1225}$ [1 mark]

Answer _____

2 Here are some numbers.

4	6	7	9	9
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2 (a) Write down the mode. [1 mark]

Answer _____

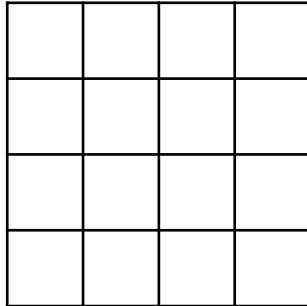
2 (b) Write down the median. [1 mark]

Answer _____





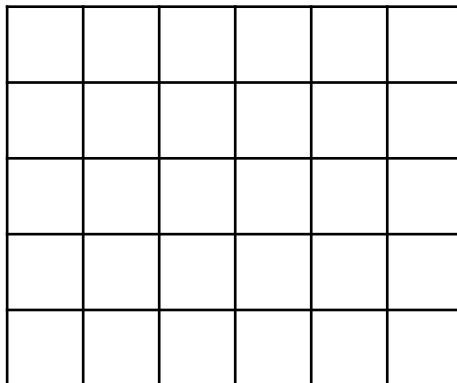
3 (a) Here is a centimetre grid.



Shade 50% of the grid.

[1 mark]

3 (b) Here is another centimetre grid.



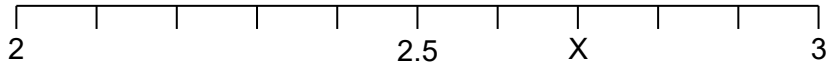
Shade $\frac{1}{3}$ of the grid.

[1 mark]





4 (a) Here is a number line.

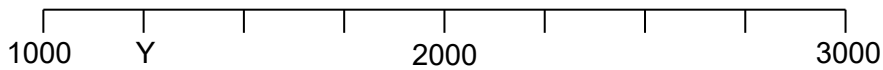


What number is at X?

[1 mark]

Answer _____

4 (b) Here is another number line.

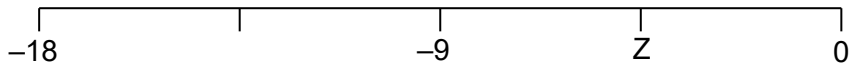


What number is at Y?

[1 mark]

Answer _____

4 (c) Here is another number line.



What number is at Z?

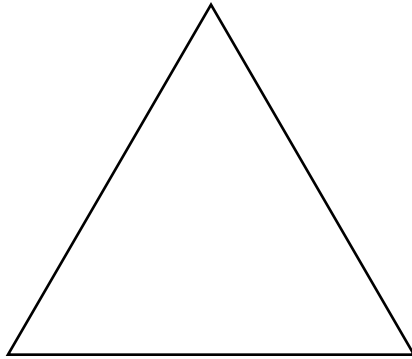
[1 mark]

Answer _____





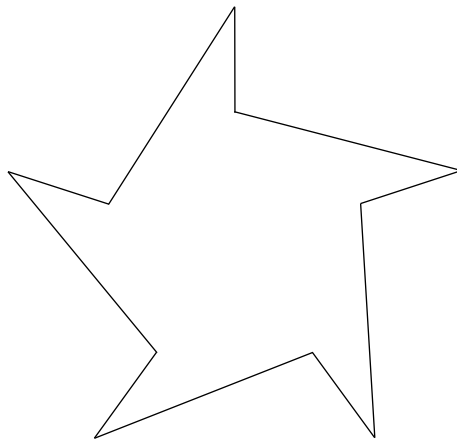
5 (a) Here is an equilateral triangle.



Draw all of the lines of symmetry onto the equilateral triangle.

[1 mark]

5 (b) Here is another shape.



Write down the order of rotational symmetry.

[1 mark]

Answer _____

5

Turn over ►





6 Put these in order from smallest to largest.

[3 marks]

$$\frac{1}{3}$$

$$0.18$$

$$\frac{1}{5}$$

$$0.3$$

Smallest _____

Largest _____

7 Simplify $9 + 10m - 2 - m$

[2 marks]

Answer _____

8 Factorise $4a + 14$

[1 mark]

Answer _____





9 Aqib is buying an ice cream.

He must choose two **different** flavours from

- Vanilla (V)
- Chocolate (C)
- Strawberry (S)
- Mint (M)
- Pistachio (P)

Complete the list of the ten possible ice cream combinations Aqib can choose.

[3 marks]

VC	

10 Solve $3x - 5 < 46$

[2 marks]

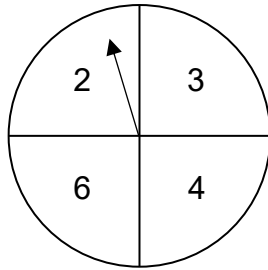
Answer _____



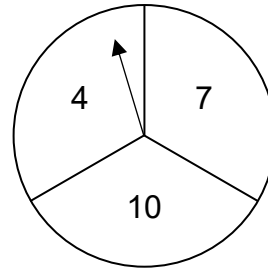


- 11 Two fair spinners are used in a game.

Spinner A



Spinner B



Players must spin **both** spinners to work out their score.

The score is the number on spinner **A** multiplied by the number on spinner **B**.

- 11 (a) Layla's score is an odd number. [1 mark]
Write down Layla's score.

Answer _____

- 11 (b) Olivia's score is a square number. [1 mark]
Write down Olivia's score.

Answer _____

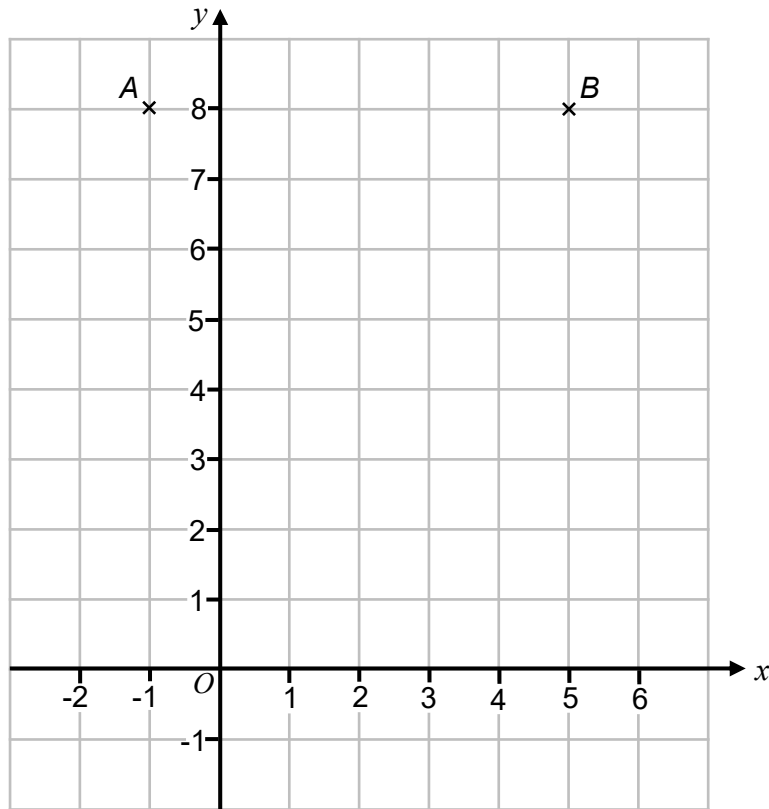
- 11 (c) Alfie's score is between 40 and 50. [1 mark]
Write down Alfie's score.

Answer _____





- 12 Points A and B are plotted on the grid.



- 12 (a) Write down the coordinates of point A .

[1 mark]

Answer (_____ , _____)

- 12 (b) Plot point C on the grid so that.

[2 marks]

ABC is an **isosceles** triangle.

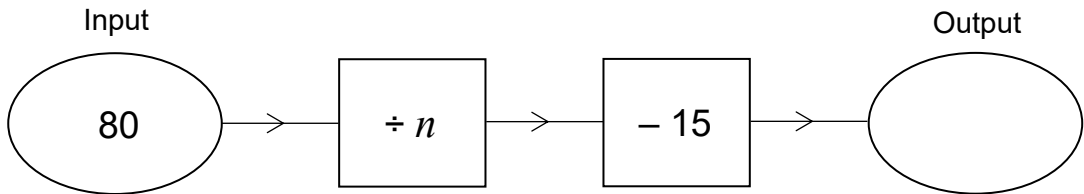
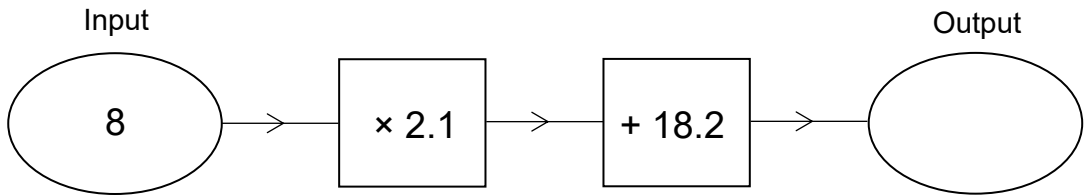
The x -coordinate of point C is the same as the y -coordinate of point C .





13

Here are two number machines.



The **output** of both number machines is the same.

Work out the value of n .

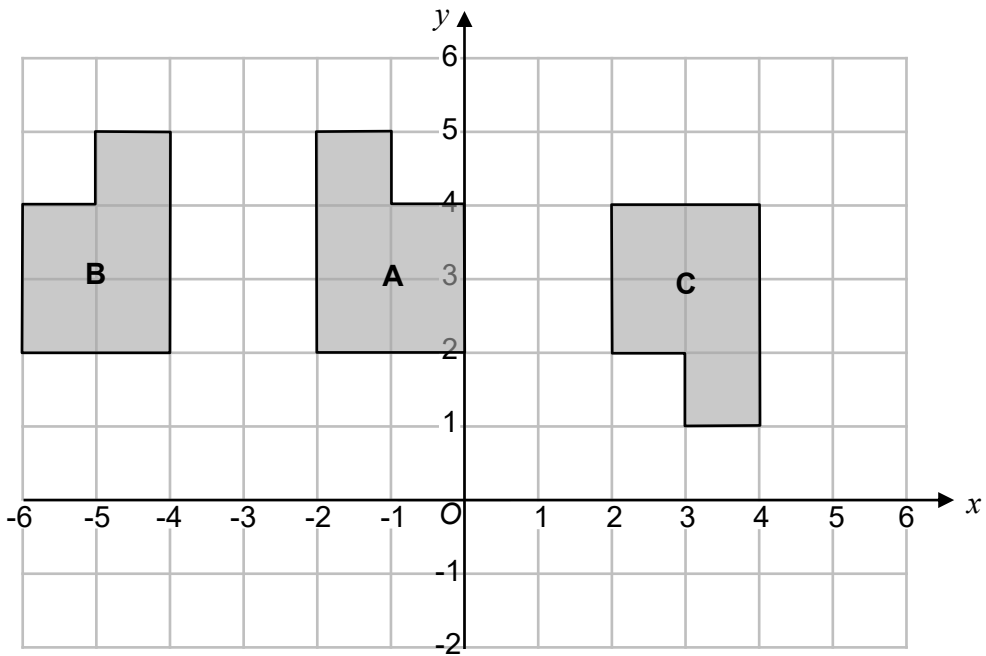
[4 marks]

$n =$ _____





14



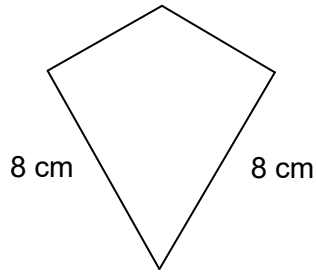
14 (a) Describe fully the single transformation that maps shape **A** onto shape **B**. [2 marks]

14 (b) Describe fully the single transformation that maps shape **A** onto shape **C**. [2 marks]

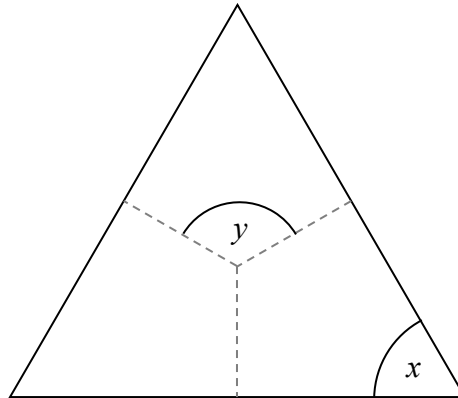




- 15 Here is a kite.



Three identical copies of the kite are used to make an equilateral triangle.



- 15 (a) Work out the size of the angle marked x .

[1 mark]

Answer _____

- 15 (b) Work out the size of the angle marked y .

[1 mark]

Answer _____

- 15 (c) Work out the perimeter of the equilateral triangle.

[2 marks]

Answer _____ cm

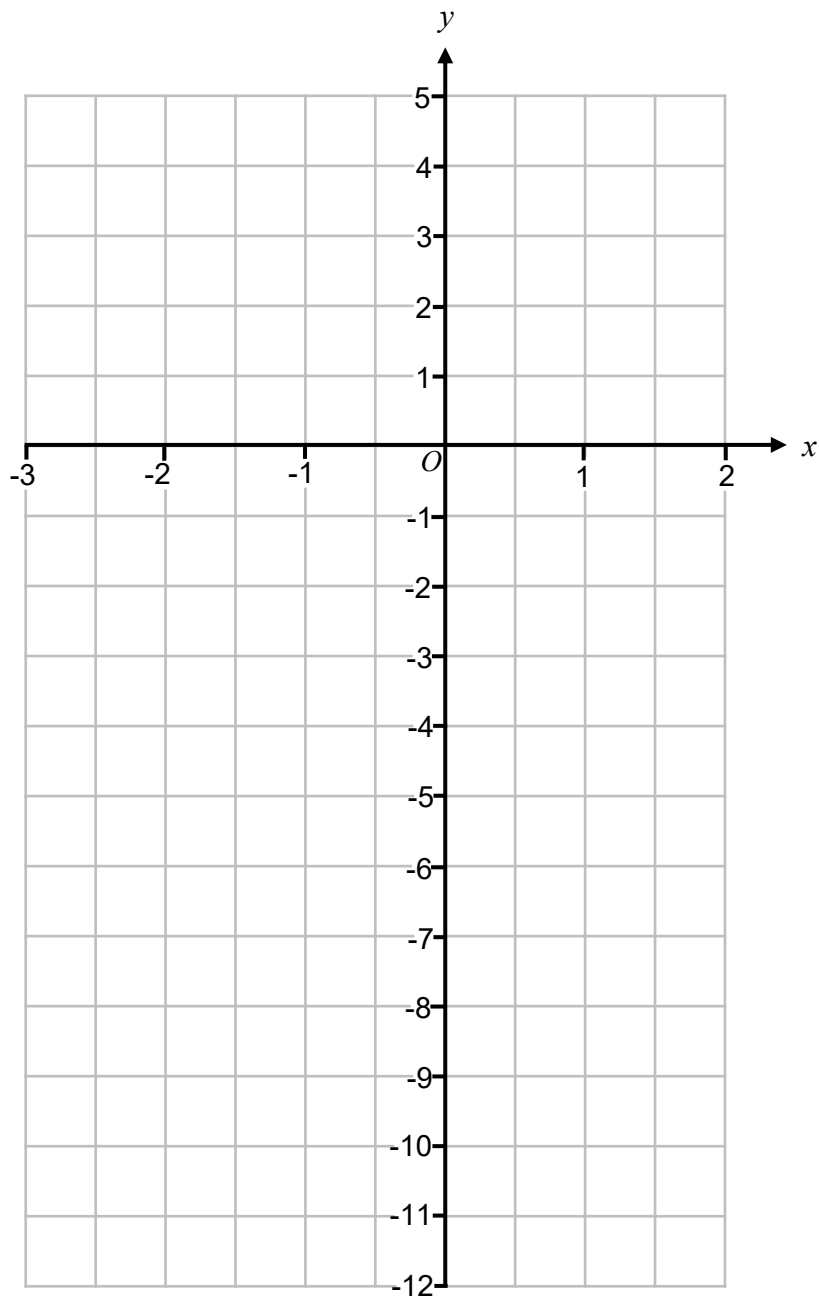




16

On the grid, draw the graph of $y = 3x - 1$ for values of x from -3 to 2

[3 marks]



7

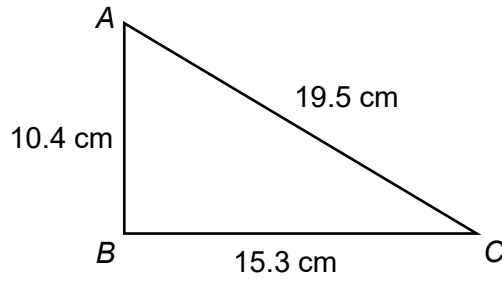
Turn over ►





17

Here is triangle ABC .



Not drawn
accurately

Is angle ABC a right angle?
Show working to support your answer.

[2 marks]

☐

Yes

☐

No





18 (a) Sequence **A** is a linear sequence with

$$1^{\text{st}} \text{ term} = 6$$

$$5^{\text{th}} \text{ term} = 50$$

Work out an expression for the n th term of the sequence.

[3 marks]

Answer _____

18 (b) Sequence **B** is a Fibonacci sequence with

$$1^{\text{st}} \text{ term} = 2.5$$

$$2^{\text{nd}} \text{ term} = 3.3$$

Work out the value of first term in the sequence that is an integer.

[3 marks]

Answer _____

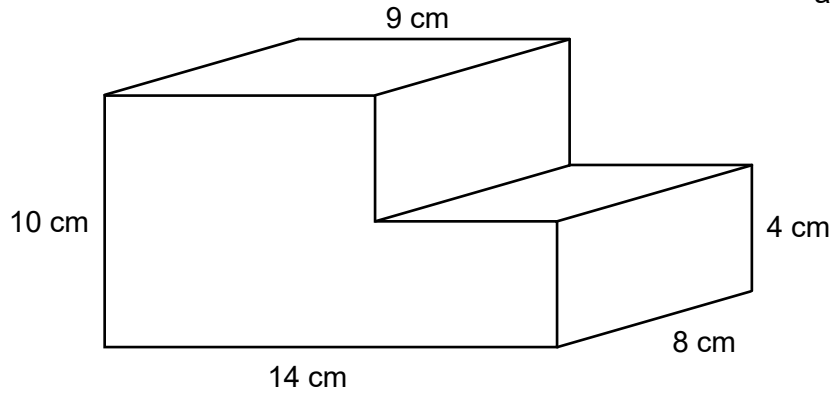




19

The cross section of a prism is made from two rectangles.

Not drawn
accurately



Work out the volume of the prism.

[4 marks]

Answer _____ cm^3





20

The table shows information about the screen time of 50 teenagers.

Screen Time, T (minutes)	Frequency		
$200 < T \leq 300$	6		
$300 < T \leq 400$	17		
$400 < T \leq 500$	14		
$500 < T \leq 600$	13		

20 (a) Work out an estimate for the mean screen time of the 50 teenagers. [3 marks]

Answer _____ minutes

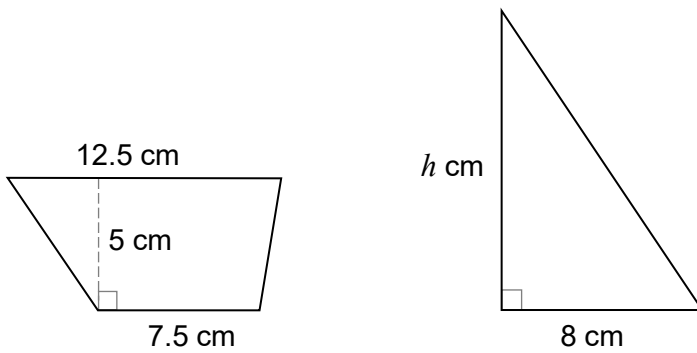
20 (b) Which interval contains the median?
You **must** show your working. [2 marks]

Answer _____ $< T \leq$ _____



21

Here is a trapezium and a triangle.



Not drawn
accurately

The area of the triangle is 24% more than the area of the trapezium.

Work out the value of h , the perpendicular height of the triangle.

[5 marks]

$h =$ _____ cm





22 Here is some information about 72 counters in a box.

The counters are coloured either red or green and are either large or small.

number of red counters : number of green counters = 3 : 5

11 of the red counters are small.

8 of the green counters are large.

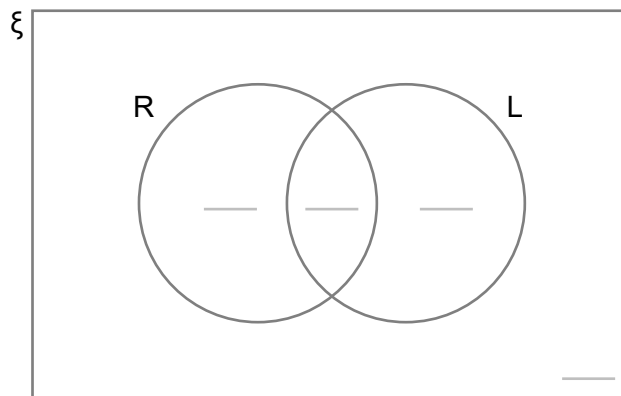
22 (a) Complete the Venn diagram to represent the information.

[4 marks]

ξ = 72 counters in a box

R = red counters

L = large counters



22 (b) One of the counters is chosen at random.

Write down the probability that this counter is a large green counter.

[1 mark]

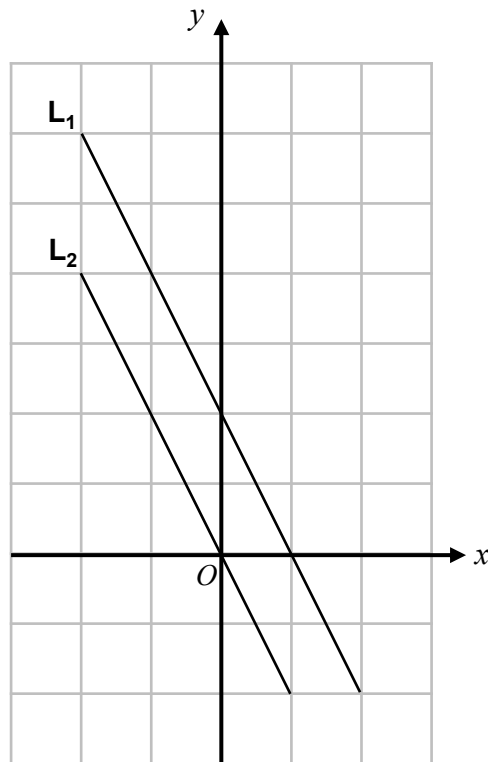
Answer _____





23

The lines L_1 and L_2 are shown on the grid.



For each statement below, tick the correct box.

[3 marks]

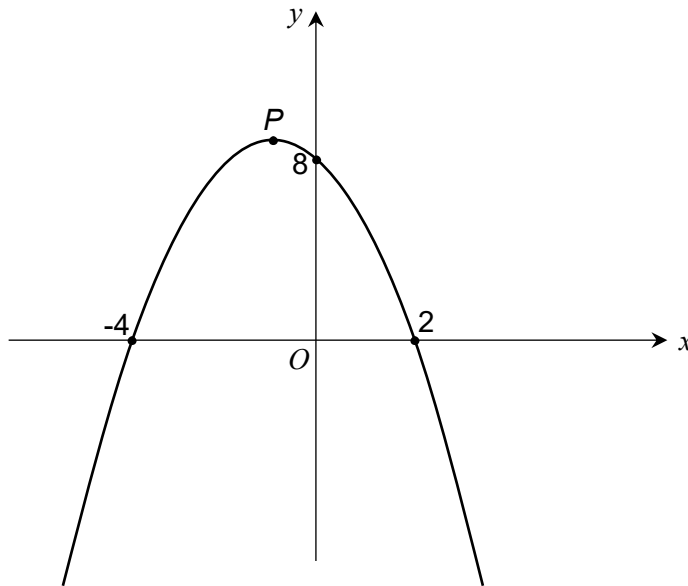
	Must be true	Could be true	Cannot be true
The gradient of L_1 is positive	☐	☐	☐
The coordinates of the y -intercept of L_1 are $(0, 2)$	☐	☐	☐
Lines L_1 and L_2 are parallel.	☐	☐	☐





24

Here is a sketch of the curve $y = -x^2 - 2x + 8$



24 (a) Write down the roots of $-x^2 - 2x + 8 = 0$

[1 mark]

Answer _____ and _____

24 (b) Write down the coordinates of the y -intercept of the curve.

[1 mark]

Answer (_____ , _____)

24 (c) Write down the x -coordinate of P , the turning point of the curve.

[1 mark]

Answer _____





25 (a) Simplify $\frac{20c^4}{5c}$

[2 marks]

Answer _____

25 (b) Simplify $(4n^5)^3$

[2 marks]

Answer _____

END OF QUESTIONS

