

# THE BRAIN STORM EDUCATIONAL SERVICES

SET III TERM TWO EXAMINATION 2024

P.7 MATHEMATICS

Time allowed: 2HOURS: 15 MINUTES

EMIS					PERSONAL No.				

INDEX NO.

CANDIDATE'S NAME: .....

CANDIDATE'S SIGNATURE: .....

RANDOM NUMBER: .....

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.**

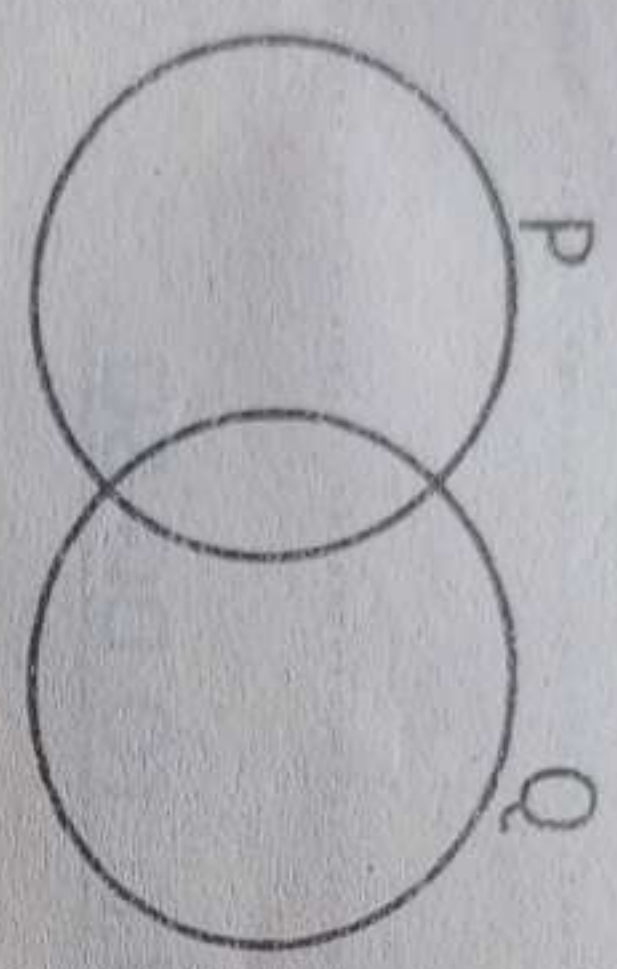
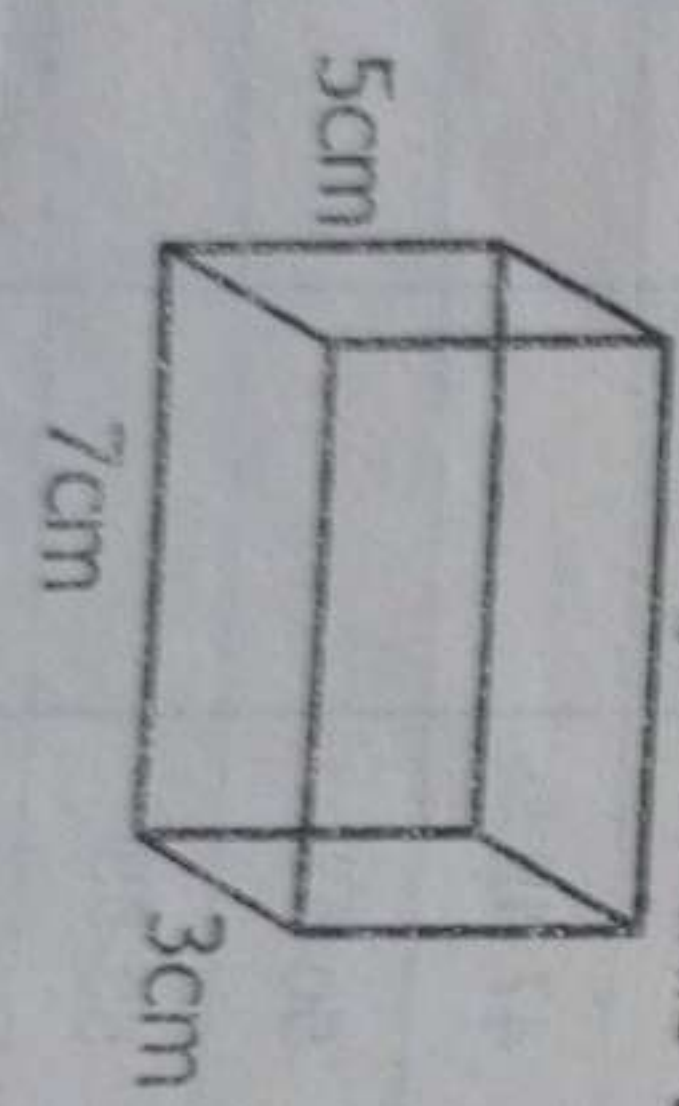
Read the following instructions carefully.

1. This paper is made up of two sections:  
**A and B**
2. Answers to both sections must be written in the spaces provided in full sentences.
3. Section **A** has **40** questions (40 marks)
4. Section **B** has **15** questions (60 marks)
5. Attempt **ALL** questions. All answers to both Sections **A** and **B** **MUST** be written in the spaces provided
6. ALL answers must be written in blue or Black ball point or ink. Only diagrams And graphs work must be done in pencil
7. Crossing of answers will lead to loss of marks.
8. any handwriting that cannot be easily read may lead to loss of marks.

FOR EXAMINERS USE ONLY		
Q.N.NO.	MARK	SIGN
1-10		
11-20		
21-30		
31-40		
41-43		
44-46		
47-49		
50-52		
53-55		
<b>TOTAL</b>		



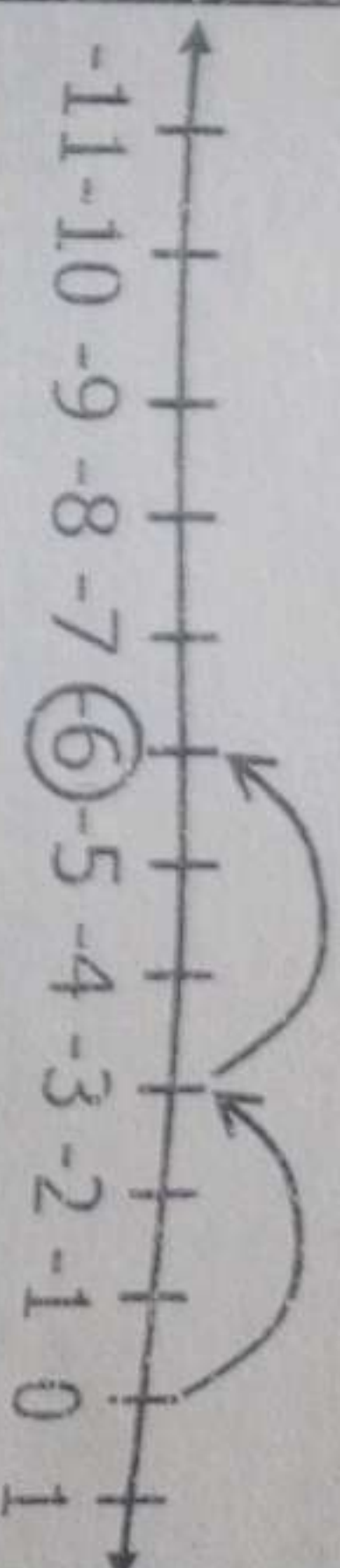
# SECTION A

<p>1. Workout: <math>56 + 23 =</math></p>	<p>2. Simplify: <math>4y + y - 3y</math></p>
<p>3. Write 840,017 in words</p>	<p>4. Find the next number in the sequence. 12, 9, 6, 3, _____</p>
<p>5. Shade the complement of set <math>P \cap Q</math>.</p> 	<p>6. Shanitah had 15 pens in a bag. If 9 pens were red and the rest were black. What is the probability of picking a black pen at random?</p>
<p>7. Solve the inequality. <math>2(4 + y) &lt; 18</math></p>	<p>8. The area of a square flower garden is <math>196\text{m}^2</math>. Find the length of each side.</p>
<p>9. A wire is welded into the shape below. What is the length of this wire?</p> 	<p>10. Given that <math>32_k = 110_{\text{four}}</math>. Find the value of <math>k</math>.</p>



11. Emmanuel had  $\frac{5}{6}$  of his salary and spent  $\frac{1}{4}$  of it. What fraction remained?

12. Write the mathematical statement represented on the number line below.



13. A regular polygon has 16 right angles. How many sides has the polygon?

14. Hakim is thrice as old as Aisha. Their total age is 52 years. How old is Aisha?

15. Find the number which has been expanded below.  
 $(2 \times 10^2) + (7 \times 10^{-1})$

16. Ojok bought 30 books at sh. 6000 per dozen. How much did he spend?

17. Joyce ate lunch at the time shown below. Express this time in 24 Hour clock notation



18. Workout:  $14 \div 2$   
 15 5



19. Nyapendi has goats and sheep in the ratio of 3:2. If he has 24 goats, how many sheep does she have?

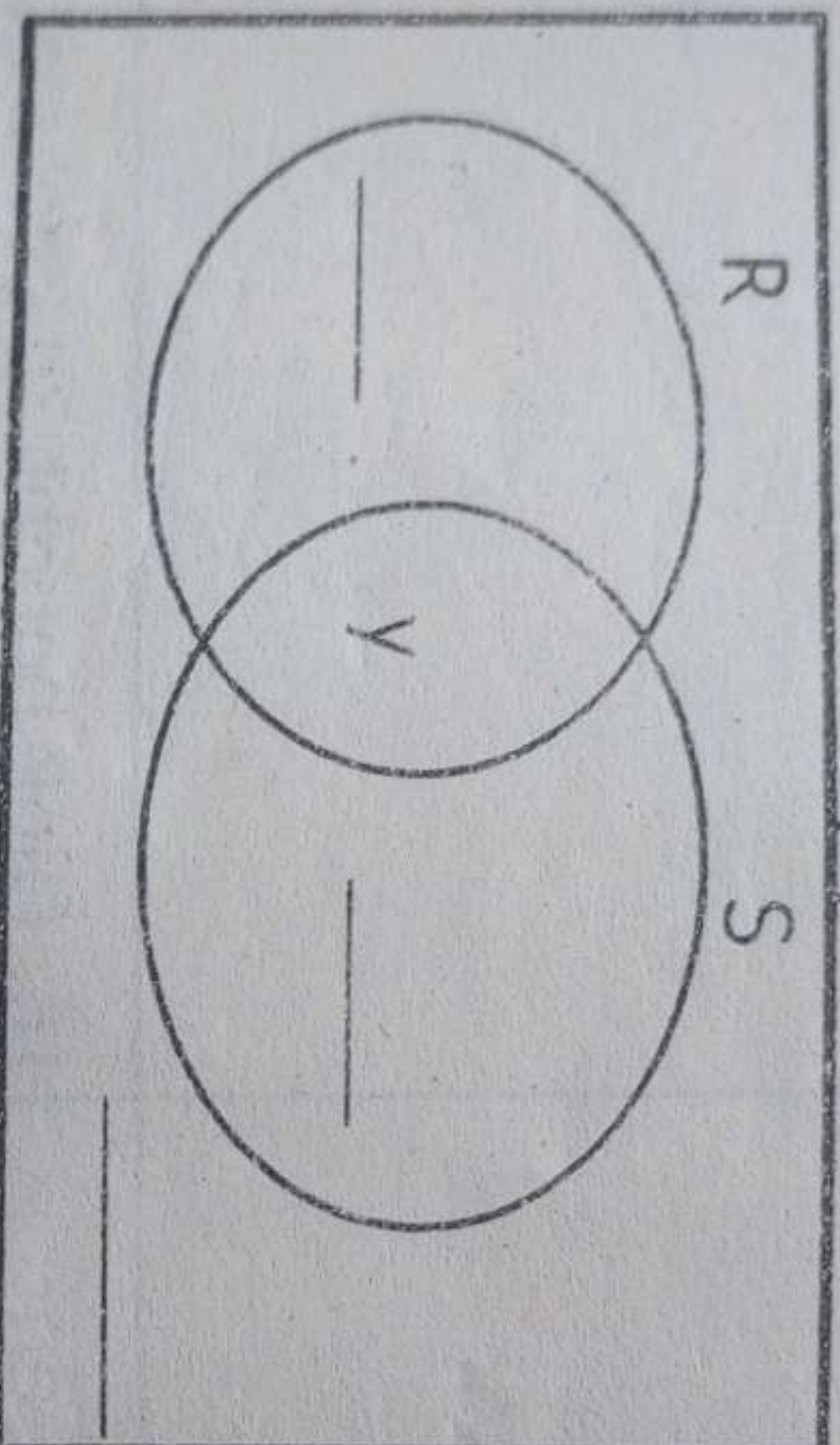
20. The LCM of two numbers is 72 and their GCF is 6. If one of the numbers is 24, find the second number.

### SECTION B

21. In a village of 49 farmers, 20 grow rice (R), 25 grow sorghum (S) and y grow both crops while 3y grow neither of the two crops.

a). Complete the Venn diagram below.

$$n(\varepsilon) = 49$$



b). Find the value of y.

(3mks)

(2mks)

c). How many farmers grow neither rice nor sorghum?

(1mk)

22a) Express 0.0508 in scientific form.

(2mks)



b). Write 144 as a product of its prime numbers.

(2mks)

23. A woman went shopping and brought the following items as shown in the table below;

Item	Quantity	Price	Amount
Rice	3kg	sh. 3800 per kg	sh. _____
Meat	_____kg	sh. 12000 per kg	sh. 6000
Cooking oil	500ml	sh. 7000 per litre	sh. _____
<b>Total</b>			sh. _____

a). Complete the above shopping table.

(4mks)

b). How much did she pay for all the items if she was given a 10% discount?

(2mks)

24a). A lady was born in 14 BC and died in 30 AD. How old was she when she died?

(3mks)

b). In a quiz with 25 questions, a teacher awarded 4 marks for each correct answer given and deducted one mark for every wrong answer. If Allan got 22 questions correct, how many marks did he get?

(3mks)



25a) Decrease 600 by 15%

(2mks)

b). A shopkeeper sold a radio at sh. 120,000 and made a profit of 20%. Find the cost price of the radio.

(3mks)

26. Kato drove his car from town A to town B between 10.30pm and 1:10am.

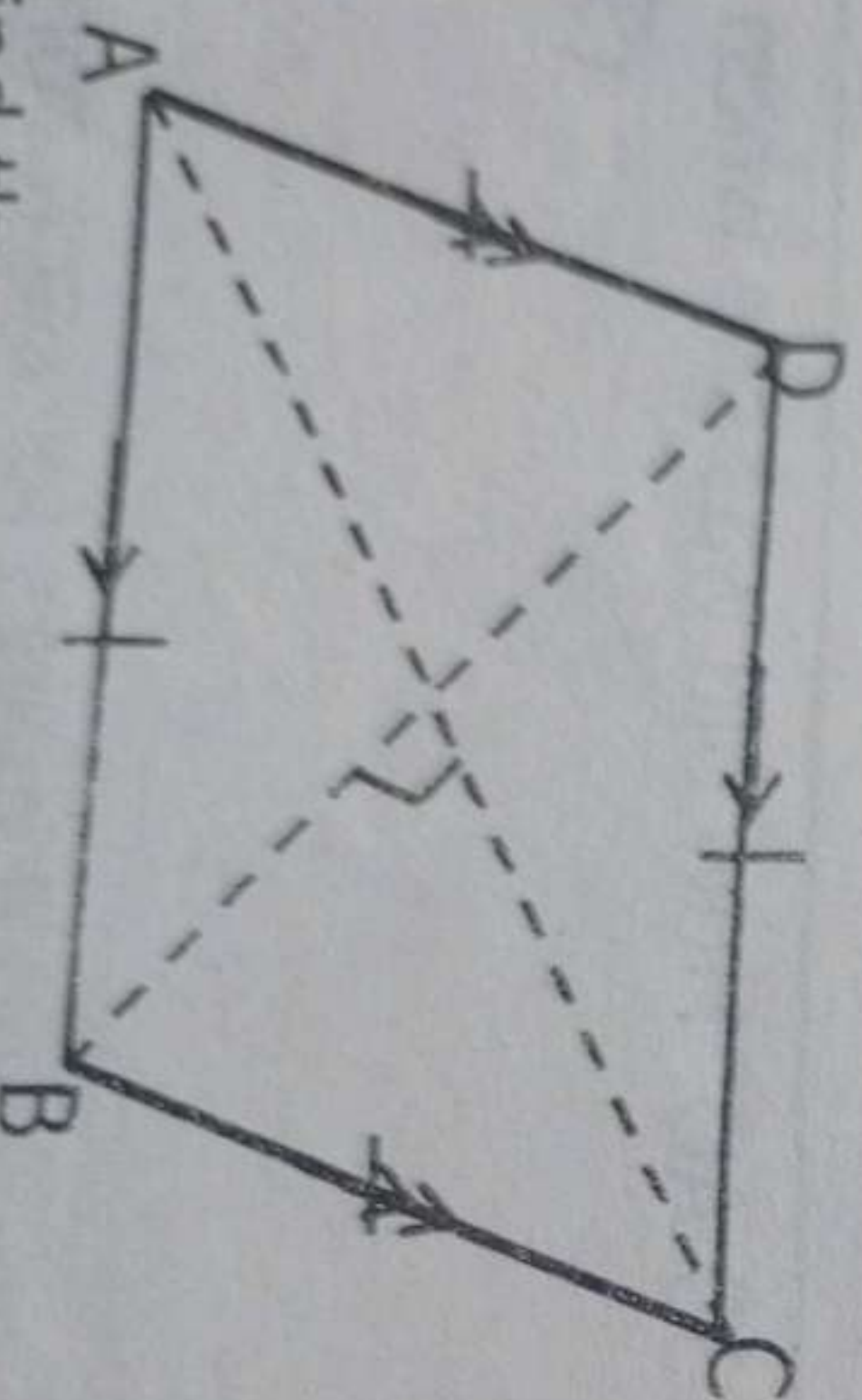
a). How long did he take to cover the distance?

(3mks)

b). If the distance between towns A and B is 180km, calculate the speed at which Kato was travelling.

(2mks)

27. The diagram below shows a rhombus ABCD whose diagonals AC = 24cm and BD is 10cm



a). Find the area of the rhombus.

(2mks)



b). Calculate its perimeter.

(4mks)

28. Susan has two children, a son and a daughter. If the son is half her age, the daughter is a third her age and the total age of the two children is 30 years.

a). Find Susan's age.

(3mks)

b). How old is the son?

(1mk)

29. A cylindrical tank of diameter 70cm contains water to a height of 100cm. Find the amount of water the tank contains in litres.

(4mks)

30. Given that  $x = 3y$  and  $y = 5$ . Find the value of;

(3mks)

i).  $2y + 6x$

(2mks)

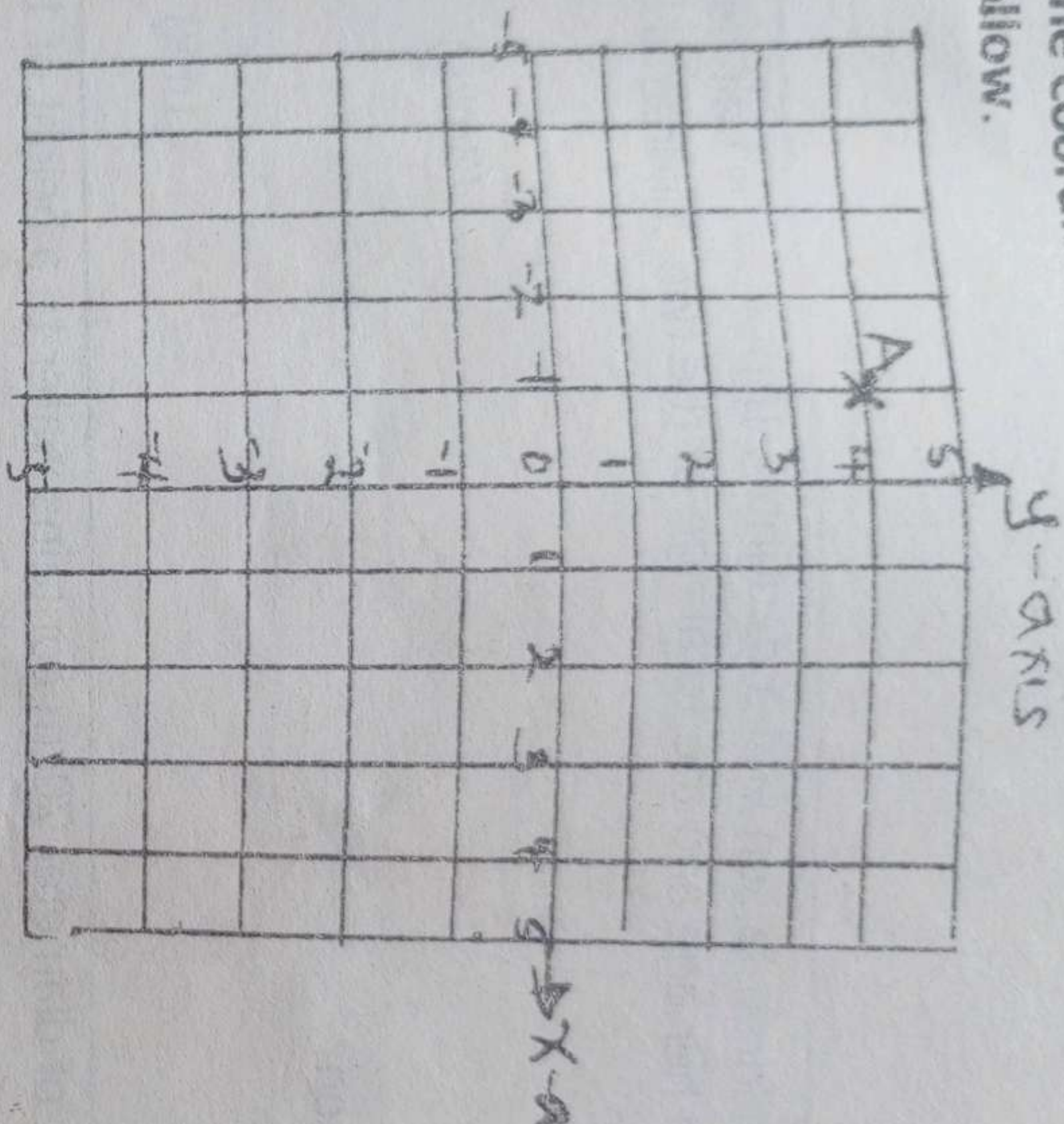
ii).  $x^2$

31. The total mass of tins of honey in a box is 3.25kg. The mass of each tin is 250g. find the number of tins in the box.

(4mks)



32. Study the coordinate graph below and use it to answer questions that follow.



a). Write the coordinates of point A

(1mk)

b). Plot the points  $B(+2, +2)$  and  $C(4, -1)$  on the graph.

(2mks)

c). Joins points A to B, B to C and C to A.

(1mk)

d). Name the figure formed above.

The End