MATHS

BOOKS - RS AGGARWAL MATHS (HINGLISH)

INTRODUCTION TO COORDINATE GEOMETRY

Examples

1. Plot each of the following points on a graph paper: (i) A(5, 2) (ii) B(-2, 4) (iii) C(-4, -6) (iv) D(4, -3)

2. Plot each of the following points on a graph paper:

(i) (-3, 0)

(ii) (3, 0)

(iii) (0, -3)

(iv) (0, 3)

3. Plot the points A(1, 2), B(2, 4), C(3,6) and D(4, 8) on a graph paper. Check if the given points lie on a straight line. Produce BA downwards. Does it pass through the origin?

4. On a graph paper, plot the points A(1, 1), B(1, 2), C(2, 1) and D(2, 2). Show that ACDB is a square.

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5. On a graph paper, plot the points A(2, 4), B(3, 3), C(4, 2) and D(5, 4). Show that ABC is a straight line and ACD is a triangle.

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6. Write the coordinates of the vertices of the following figure.

Exercise A

1. Write the abscissa of each of the following points:

(i) (0, 5)

(ii) (3, 7)

(iii) (-2, 4)

(iv) (6, -3)

2. Write the ordinate of each of the following

points:

(i) (4, 0)

(ii) (5, 2)

(iii) (1, -4)

(iv) (-10, -7)

3. On a graph paper, plot each of the following points:

(i) A(4, 3)

(ii) B(-2, 5)

(iii) C(0, 4)

(iv) D(7, 0)

(v) E(-3, -5)

(vi) F(5, -3)

(vii) G(-5, -5)

(viii) H(0, 0)

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4. Plot each of the following points on a graph sheet. Verify that they lie on a line.

(i) A(4, 0), B(4, 2), C(4, 2.5) and D(4, 6)

(ii) P(1, 1), Q(2, 2), R(3, 3) and S(4, 4)

(iii) L(6, 2), M(5, 3), N(3, 5) and O(2, 6)

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5. Plot the given points on a graph sheet and check if they lie on a straight line. If not, name the shape they form when joined in the given

order.

(i) A(0, 2), B(0,3.5), C(0, 5) and D(0, 6)

(ii) P(1, 3), Q(1, 5), R(3, 3) and S(3, 5)

(iii) E(4, 5), F(5, 5), G(5, 7) and H(6, 5)

(iv) L(2, 0), M(2, 3), N(0, 3) and O(0, 0)

(v) J(4, 3), K(6, 1), L(6, 5) and M(4, 7)

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6. Locate the points A (1,2), B (4,2) and C (1,4)

on a graph sheet taking suitable axes. Write

the coordinates of the fourth point D to complete the rectangle ABCD.

7. Locate the points A(1, 2), B(3, 4) and C(5, 2) on a graph sheet taking suitable axes. Write the coordinates of the fourth point D in order to complete the rhombus ABCD. Measure the diagonals of this rhombus and check whether they are equal or not.

8. Locate the points P(3, 4), Q(1, 0), R(0, 4) and S(4, 1) on a graph sheet and write the coordinates of the point of intersection of line segments PQ and RS.

9. Plot the points A(2, 4) and B(4, 2) on a graph sheet and draw a line passing through these two points. Extend the line on both sides to meet the coordinate axes. What are the

coordinates of the points where this line meets the x-axis and the y-axis?

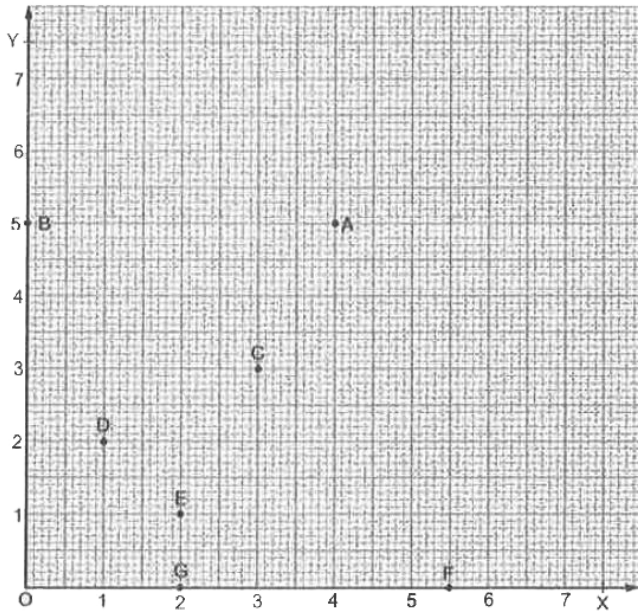**10.** From the given figure, choose the letters that indicate the location of the following points:

(a) (2, 1)

(b) (0, 5)

(c) (2, 0)

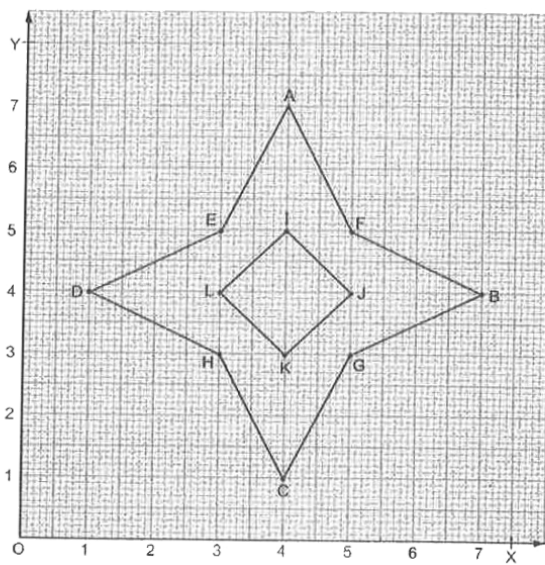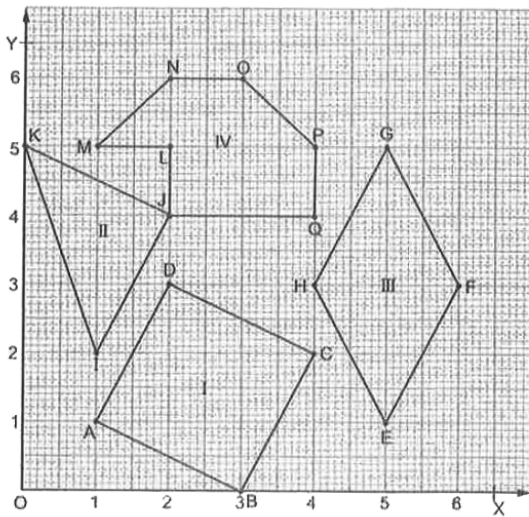Also, mention the coordinates of the points A

and F.

11. Write the coordinates of all the points in the graph given below:

12. Write the coordinates of the vertices of each of the figures given below:

13. Fill in the blanks to make the given statements true.

(i) A point in which the x-coordinate is 0 and y-coordinate is 5 will lie on _____ .

(ii) All points with y-coordinate as 0 lie on _____ .

(iii) The x-coordinate of any point lying on the y-axis is always _____ .

(iv) The point where the two axes intersect is called the _____ .

(v) For the point (5, 2), the distance from the x-axis is _____ units.

(vi) The distance of any point from the y-axis is the _____ coordinate.

(vii) The coordinates of the origin are _____ .

1. In which of the following quadrants does the point P(3, 6) lie?

A. I

B. II

C. III

D. IV

Answer: A

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2. In which of the following quadrants does the point (-7, -1) lie?

A. I

B. II

C. III

D. IV

Answer: C

3. In which of the following quadrants does the point A(2, -3) lie?

A. I

B. II

C. III

D. IV

Answer: D

4. In which of the following quadrants does the point Q(-4, 1) lie?

A. I

B. II

C. III

D. IV

Answer: B

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5. The abscissa of a point is its distance from the

A. origin

B. x-axis

C. y-axis

D. none of these

Answer: C

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6. The graph of y = a is

A. the x-axis

B. the y-axis

C. a line parallel to the y-axis

D. a line parallel to the x-axis

Answer: D

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7. y -अक्ष को निरूपित करने वाला समीकरण लिखिए।

A. x = 0

B. y = 0

C. x = a

D. y = a

Answer: A