DEVESH TEDIA CLASSES

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D.T.CLASSES
Class 09 - Mathematics

Section A

1. A(-6, 3) be a point on the graph. Draw $AL \perp x-axis$. The co-ordinates of L are **[1]**

   a) (-6, 3) b) (-6, 0)

   c) (0, 0) d) (0, -6)

2. Abscissa of all points on the x-axis is **[1]**

   a) -1 b) any number

   c) 1 d) 0

3. If the x co-ordinate of a point is zero, then this point always lies: **[1]**

   a) on y-axis b) in quadrant IV

   c) in quadrant III d) on x-axis

4. The point whose ordinate is 6 and which point lies on the y-axis? **[1]**

   a) (0, 6) b) (6, 6)

   c) (6, 4) d) (6, 0)

5. A point is at a distance of 3 units from the x-axis and 7 units from the y-axis. Which of the **[1]**
   following may be the co-ordinates of the point?

   a) (4, 5) b) (0, 0)

   c) (7, 3) d) (3, 7)

6. The point which lies on y-axis at a distance of 3 units in the negative direction of y-axis is **[1]**

   a) (0, 3) b) (3, 0)

   c) (-3, 0) d) (0, -3)

7. The points (other than the origin) for which the abscissa is equal to the ordinate lie in **[1]**

   a) quadrant III only b) quadrants II and IV

   c) quadrant I only d) quadrants I and III

8. Ordinate of all points on the x-axis is **[1]**

   a) 1 b) 2

   c) 0 d) any number

9. In the fourth quadrant, **[1]**

   a) x is +ve, y is +ve b) x is -ve, y is +ve

   c) x is -ve, y is -ve d) x is +ve, y is -ve

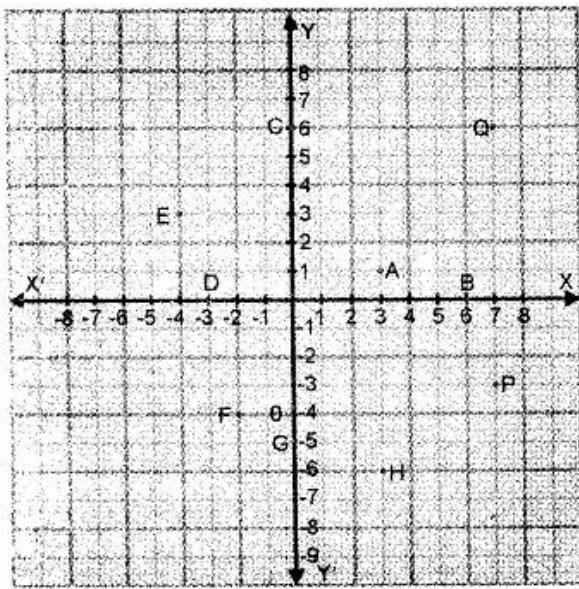10. The perpendicular distance of the point P (4, 3) from y-axis is **[1]**

    a) 6   b) 5

    c) 3   d) 4

11. The point (a, -a) always lies on _____. **[1]**

    a) x - y = 0   b) x = -a

    c) y = a   d) x + y = 0

12. In which quadrant does the point (-7, -4) lie? **[1]**

    a) IV   b) II

    c) III   d) I

13. The point which lies on y-axis at a distance of 6 units in the positive direction of y-axis is **[1]**

    a) (0, -6)   b) (-6, 0)

    c) (0, 6)   d) (6, 0)

14. The point O (0, 0) lies on: **[1]**

    a) y-axis   b) both x-axis and y-axis

    c) x-axis   d) any quadrant

15. The signs of abscissa and ordinate of a point in quadrant II are respectively _____. **[1]**

    a) (-, +)   b) (-, -)

    c) (+, +)   d) (+, -)

16. The co-ordinates of a point below the x-axis lying on y-axis at a distance of 4 units are **[1]**

    a) (-4, 0)   b) (4, 0)

    c) (0, 4)   d) (0, -4)

17. Points (1, 0) and (-1, 0) lies on **[1]**

    a) x-axis   b) y-axis

    c) line x + y = 0   d) line x - y = 0

18. The point whose ordinate is 3 and which lies on the y-axis is **[1]**

    a) (3,3)   b) (0,3)

    c) (1,3)   d) (3,0)

19. A point whose abscissa is -3 and ordinate 2 lies in **[1]**

    a) first quadrant   b) fourth quadrant

    c) third quadrant   d) second quadrant

20. Points (1, -1), (2, -2), (4, -5), (-3, -4) **[1]**

    a) lie in IV quadrant   b) lie in III quadrant

    c) lie in II quadrant   d) Do not lie in the same quadrant

21. A point whose abscissa and ordinate are 2 and - 5 respectively, lies in **[1]**

a) Third quadrant

b) First quadrant

c) Fourth quadrant

d) Second quadrant

22. The distance of the point P (4, 3) from the origin is **[1]**

a) 3

b) 7

c) 5

d) 4

23. The point which lies on x-axis at a distance of 3 units in the positive direction of x-axis is **[1]**

a) (-3, 0)

b) (0, 3)

c) (3, 0)

d) (0, -3)

24. The points A(-2, 3), B(-2, -4) and C(5, -4) are the vertices of the square ABCD, then the co-ordinates **[1]** of the vertex D are:

a) (5, 3)

b) (3, 3)

c) (0, 0)

d) (3, -4)

25. The abscissa of any point on the y-axis is **[1]**

a) 0

b) 1

c) y

d) -1

26. The coordinates of a point A on y-axis, at a distance of 4 units from x-axis and below it, are **[1]**

a) (0, 4)

b) (-4, 0)

c) (0, -4)

d) (4, 0)

27. Point (0, -8) lies **[1]**

a) on the y-axis

b) in the II quadrant

c) in the IV quadrant

d) on the x-axis

28. If A(2, 3) and B(-3, 4), then (abscissa of A) – (abscissa of B) is **[1]**

a) -5

b) 5

c) 1

d) -1

29. The point at which the two co-ordinate axes meet is called the **[1]**

a) origin

b) quadrant

c) abscissa

d) ordinate

30. The name of the horizontal line drawn to determine the position of any point in the Cartesian **[1]** plane is

a) y-axis

b) Cartesian line

c) x-axis

d) Origin

31. If the y co-ordinate of a point is zero, then this point always lies: **[1]**

a) in quadrant I

b) on x-axis

c) on y-axis

d) in quadrant II

32. The equation of x-axis is **[1]**

a) x = 0   b) y $\neq$ x

c) y = 0   d) y = x

33. The co-ordinates of a point above the x-axis lying on y-axis at a distance of 4 units are   **[1]**

a) (0, -4)   b) (0, 4)

c) (4, 0)   d) (-4, 0)

34. y co-ordinate is known as   **[1]**

a) origin   b) abscissa

c) ordinate   d) points

35. The point which lies on y-axis at a distance of 5 units in the negative direction of y-axis is   **[1]**

a) (0, 5)   b) (0, -5)

c) (5, 0)   d) (-5, 0)

36. The point (0, 9) lies   **[1]**

a) in quadrant III   b) on the positive direction of x-axis

c) in quadrant IV   d) on the positive direction of y-axis

37. If the coordinates of a point are (-5, 11), then its abscissa is   **[1]**

a) -11   b) 5

c) 11   d) -5

38. Abscissa of all the points on the y-axis is: **[1]**

a) 0   b) -1

c) 1   d) any number

39. The point (0, -4) lies   **[1]**

a) in quadrant III   b) in quadrant IV

c) on the negative direction of x-axis   d) on the negative direction of y-axis

40. If a < 0 and b > 0 then the point (a, b) lies in quadrant   **[1]**

a) II   b) IV

c) I   d) III

Section B

41. Which of the following points lie on the y-axis?   **[2]**
    A(1, 1), B(3, 0), C(0, 3), D(0, 0), E(–5, 0), F(0, –1), G(9, 0), H(0, –8).

42. Write the quadrant in which it lies: (-3, 8)   **[2]**

43. Name the quadrant in which the following points lie: (i) (5, –7) (ii) (–2, 1) (iii) (4, –8) **[2]**

44. Write the co-ordinates of each of the following points marked in the graph paper.   **[2]**

45. Name the quadrant in which the following points lie :(i) (2, 3)(ii) (–3, 4)(iii) (–3, –10)   **[2]**

46. In Fig., if ABC and ABD are equilateral triangles then find the coordinates of C and D.   **[2]**
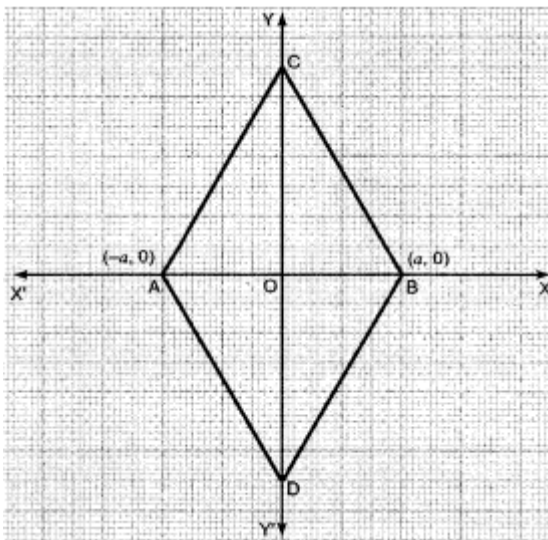
47. Which of the following points lie on the x-axis?   **[2]**

    A(1, 1), B(3, 0), C(0, 3), D(0, 0), E(–5, 0), F(0, –1), G(9, 0), H(0, –8).

48. In which quadrant will the point lie, if :   **[2]**

    (i) The y-coordinate is 3 and the x-coordinate is –4?

    (ii) The x-coordinate is –5 and the y-coordinate is –3?

    (iii) The y-coordinate is 4 and the x-coordinate is 5?

    (iv) The y-coordinate is 4 and the x-coordinate is –4?

49. Find Co-ordinates of vertices of rectangle ABCD.   **[2]**
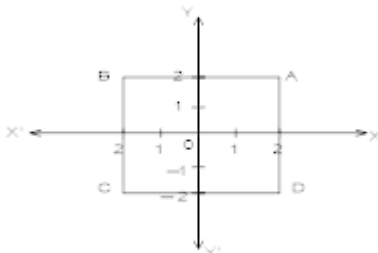
50. Name the quadrants in which the following points lie :   **[2]**

    (i) p(4, 4)

    (ii) Q(–4, 4)

(iii) R(−4, −4)

(iv) S(4, −4)

Section C

51. In fig. write the Co-ordinates of the points and if we join the points write the name of fig. formed. **[3]**
    Also write Co-ordinate of intersection point of AC and BD.
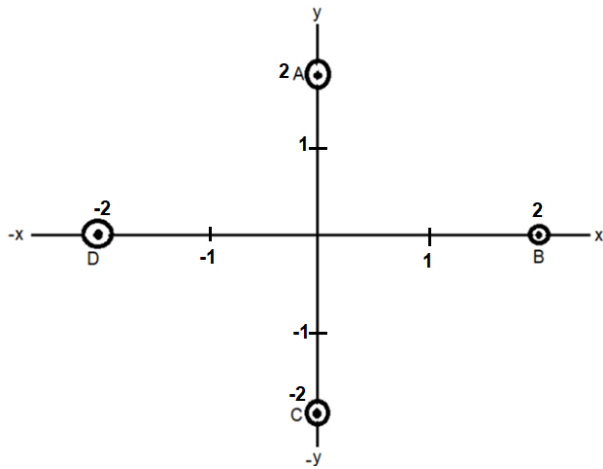
52. In fig find the vertices' co-ordinates of △ABC **[3]**
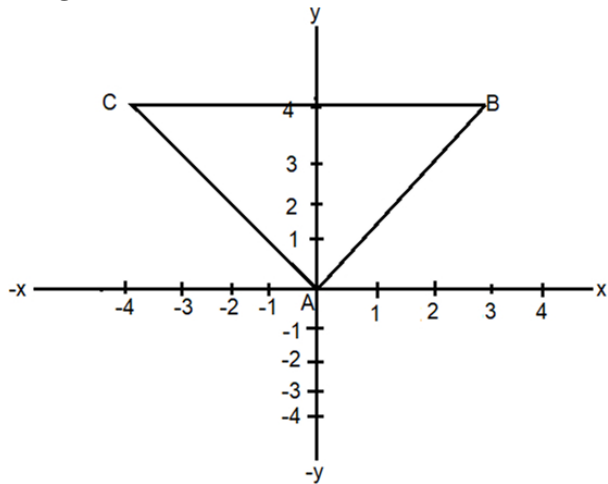
53. Write the answer of each of the following questions: **[3]**

    i. What is the name of horizontal and the vertical lines drawn to determine the position of any point in the Cartesian plane?

    ii. What is the name of each part of the plane formed by these two lines?

    iii. Write the name of the point where these two lines intersect.

54. Draw the graphs of y = x and y = -x in the same graph. Also find the co-ordinates of the point where the two lines intersect. **[3]**

55. In Figure, LM is a line parallel to the y-axis at a distance of 3 units. **[3]**
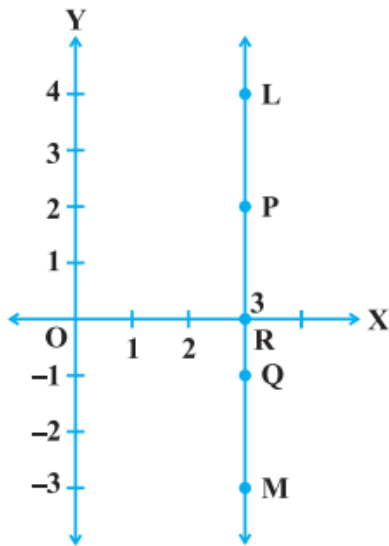
i. What are the coordinates of the points P, R and Q?

ii. What is the difference between the abscissa of the points L and M?

Section D

56. A forest ranger keeps track of bears in his area. He plotted their location on a graph. The origin represents the ranger's control room's location. To access and maintain equipment, Road x and Road y have been laid and paved inside the forest. They pass through the control room. **[4]**
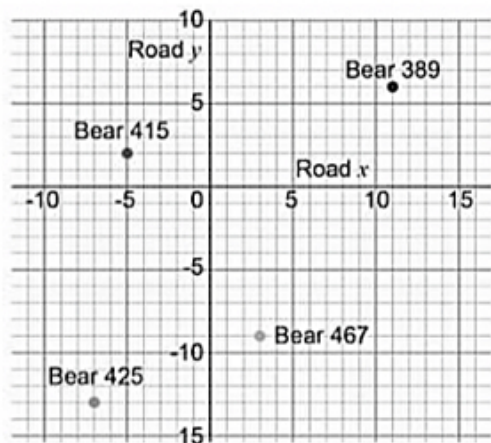
One unit on the graph paper represents 1 km.

i. Which bear is nearest to a paved road?

   a. Bear 389

   b. Bear 415

   c. Bear 425

   d. Bear 467

ii. Bear 467 has been injured. The forest rescue team starts from the control room and decides to use the paved road as much as possible. Which road should they take?

iii. How far is Bear 425 from Road x?

iv. A tiger is at (11, 4). How far from it is the nearest bear?

   a. 2 km

   b. 4 km

   c. 5 km

   d. 7 km

57. **Read the following text carefully and answer the questions that follow:** [4]
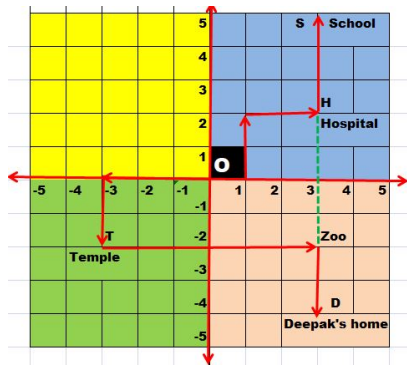
In the above picture, one small square is of size 1 km × 1 km. From the starting point O(0, 0) Deepak started to drive towards his home. He first drives 3 km in left then he turned to his left and drove 2 km, there he found a temple. He worshipped there and drove 6 km in the left direction, there is a zoo and from the zoo, he drives 2km on the right side, then he reached his home.

From O Sanjay drove for his school, he drove 1 km to his right then took a left turn and drives 2 km then again took a right turn and drives 2 km. He found a hospital in the way. From Hospital, he drove 3 km and finally reached his school.

 i. Deepak Drove in which quadrants? (1)

 ii. Sanjay Drove in which quadrants? (1)

 iii. What are the coordinates of the Hospital? (2)

   OR

   What is common abscissa of school, Hospital, Zoo, and Deepak's home? (2)

58. **Read the following text carefully and answer the questions that follow:** [4]
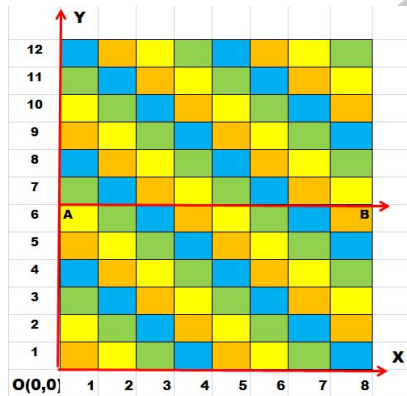
Roshan decorated one of his bathroom wall with tiles as shown in the picture. He was having tiles of four colours orange, yellow, green and blue. He fitted the tiles in 8 columns and 12 rows. The size of one tile was 1 foot × 1 foot and the area of each tile is 1 foot².

He arranged the tile in such a way that colour of tiles in each row and column were in the pattern: **Orange → Yellow → green → Blue → Orange →**..... and so on.

 i. What is the ordinate of top row tiles? (1)

 ii. Which colour tile was fitted at the point with coordinates (7, 7)? (1)

 iii. Which colour tile was fitted at the point with coordinate (2, 5)? (2)

   OR

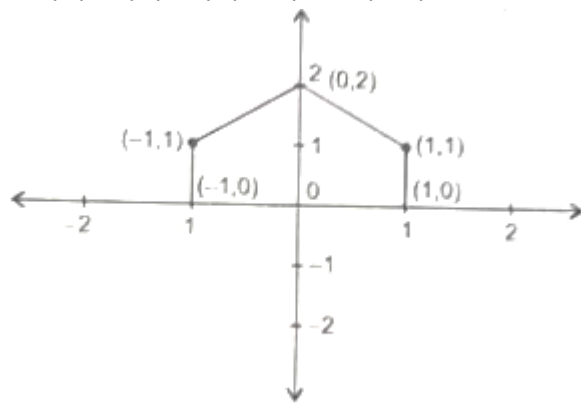   What is the area of the tiles fitted in the rectangular part OABX? (2)

59. **Read the following text carefully and answer the questions that follow:** [4]

Sohan draws a gate of a temple on the graph paper. He has following points:

(-1, 0), (1, 0), (1, 1), (-1, 1) and (0, 2)

i. In which quadrant (-1, 1) lies? (1)

ii. Write the ordinate of the point (1, 0). (1)

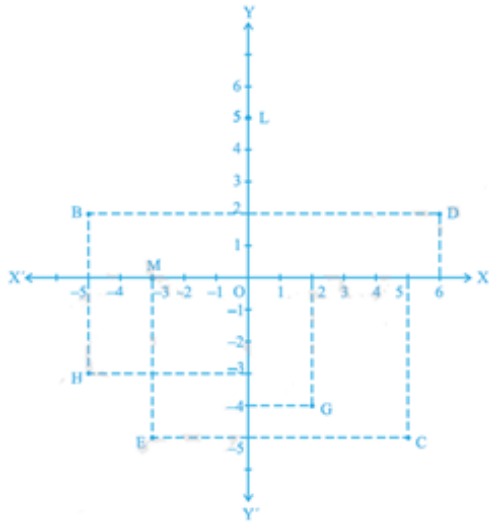iii. Write the abscissa of the point (0, 2). (2)

OR

Which point from the following lines on Y-axis? (2)

Section E

60. Write the coordinates of the vertices of a rectangle whose length and breadth are 5 and 3 units respectively, one vertex at the origin, the longer side lies on the x-axis and one of the vertices lies in the III quadrant. **[5]**

61. (Street Plan): A city has two main roads which cross each other at the centre of the city. These two roads are along the North-South direction and East-West direction. All the other streets of the city run parallel to these roads and are 200 m apart. There are 5 streets in each direction. Using 1cm = 200 m, draw a model of the city on your notebook. Represent the roads/streets by single lines. There are many cross- streets in your model. A particular cross-street is made by two streets, one running in the North-South direction and another in the East-West direction. Each cross street is referred to in the following manner: If the 2nd street running in the North-South direction and 5th in the East-West direction meet at some crossing, then we will call this cross-street (2, 5). Using this convention, find: **[5]**

i. how many cross - streets can be referred to as (4, 3).

ii. how many cross - streets can be referred to as (3, 4).

62. write the following: **[5]**

i. The coordinates of B.

ii. The coordinates of C.

iii. The point identified by the coordinates (-3, -5).

iv. The point identified by the coordinates (2, - 4).

v. The abscissa of the point D.

vi. The ordinate of the point H.

vii. The coordinates of the point L.

viii. The coordinates of the point M.