Tender Heart High School, Sector 33B, Chd.

Extra Questions (Chapter 21)

Class 9 MATHS

Date: 18.11.2024

1. State the coordinates of points A, B, C, D, ..., L.

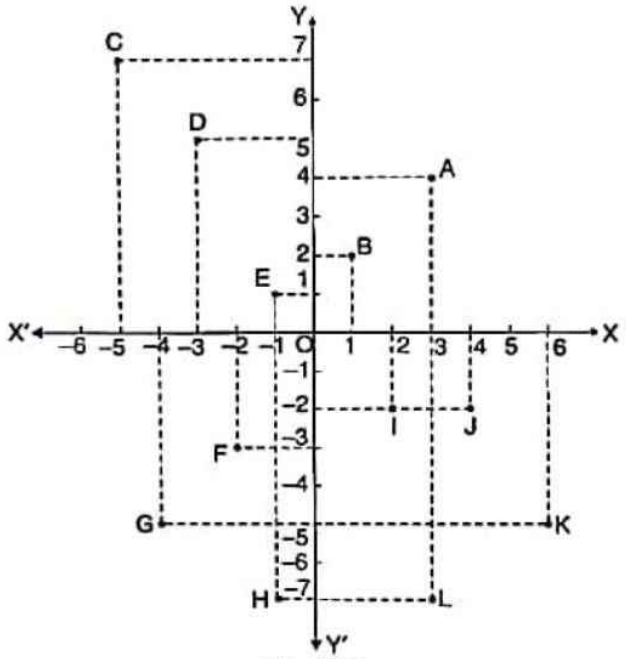

Fig. 19.8

2. Give the ordinate and the abscissa for each of the following points:
   (*i*) A(3, –4) (*ii*) B(3, –3)
   (*iii*) C(0, 8) (*iv*) D(–1, 0).

3. In which quadrant, do the following points lie?
   (3, –3), (–1, 1), (–4, 3), (–5, –4), (7, 6), (6, 8), (–9, 8), (8, 7).

4. Which of the following points lie on (*i*) *x*-axis and (*ii*) *y*-axis?
   (3, 0); (–1, 1); (0, 7); (–1, 0); (0, –7); (1, –1); (2, –3); (–2, 3); (0, 10).

5. Plot the following points on a graph paper:
   (10, 6); (–5, –4); (3, 20); (–5, –6); (–15, –12); (18, 9); (–19, 20); (–4, 5).

6. Plot the following points and measure the distance (in cm) between them using a scale.
   (*i*) (3, 4) and (–5, –6) (*ii*) (9, 0) and (0, 9)
   (*iii*) (0, 0) and (3, 4) (*iv*) (6, 0) and (7, –8).

7. Plot the points (1, –1) and (3, 3). Draw a straight line passing through the two points. Plot another point (–3, 6). Does it lie on the straight line?

8. Plot A(2, –3), B(2, 6), C(2, –1) and D(2, 0) and find if they are on one and the same straight line.

9. P is the point (–3, 7). PM and PN are perpendiculars to *x*, *y*-axes, respectively meeting them at M and N. State the coordinates of M and N.

10. Three vertices of a square are A(1, 2), B(–3, 2) and C(–3, –2). Plot these points on a graph paper and hence find the coordinates of the fourth vertex of the square. Also find the area of the square.

Class 9 MATHS

1. Fill in the blanks in the tables orally:

(*i*) $y = x$

x	0			4
y		1	3	

(*ii*) $y = x - 2.5$

x	0		2.5	4
y		1		

(*iii*) $y + x = 2.8$

x	1		−2	
y		3		4

2. Draw the graphs of

(*i*) $y = x$ (*ii*) $y = -x$ (*iii*) $y = 2x$ (*iv*) $y = -3x$.

How are these lines related? What is their common property?

3. Draw the graphs of

(*i*) $y = x + 3$ (*ii*) $y = 0.2x + 3$ (*iii*) $y = 3x + 3$.

What do you observe? Where do they intersect on the y-axis?

4. Draw the graphs of

(*i*) $y = 0.5x + 0.5$ (*ii*) $y = 2x + 0.5$ (*iii*) $y = -3.5x + 0.5$.

What do you observe? How are they related?

5. Draw the graph of

$$y = -2x + 7$$

and find whether the point (3, 1) lies on it or not.

6. Express

$$\frac{x}{2} + \frac{y}{3} = 1$$

in the form $y = mx + c$. Determine the point on x-axis where it meets the x-axis.

[Hint: $y = \frac{-3x}{2} + 3$, $m = -\frac{3}{2}$ and $c = 3$.]

7. Find out four ordered pairs of numbers that satisfy the equation

$$y = \frac{2}{3}x - \frac{4}{3}.$$

Draw the graph of the equation.

8. Draw the graph of

$$y = \frac{2}{3}x - 5.$$

Also, find the value of x when $y = 3$.

9. Draw the graphs of the equations $3x + 2y = 4$ and $y = -2x + 3$, on the same graph paper. Hence, find their points of intersection.