

MATHS

BOOKS - KUMAR PRAKASHAN KENDRA MATHS (GUJRATI ENGLISH)

COORDINATE GEOMETRY

Exercise 3 1

1. How will you describe the position of a table lamp on your study table to another person?



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Exercise 3 2

1. Write the answer of each of the following questions:

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



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2. Write the answer of each of the following questions:

What is the name of each part of the plane formed by horizontal and the vertical lines drawn to determine the position of any point in the Cartesian plane?



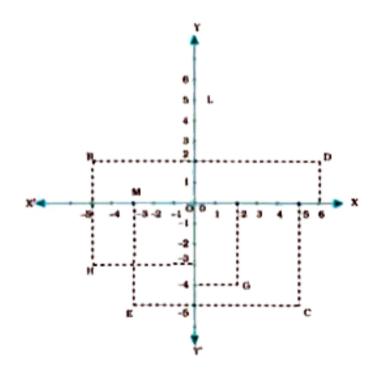
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3. Write the answer of each of the following questions:

Write name of the point where horizontal and the vertical lines drawn to determine the position of any point in the Cartesian plane intersect.

4. See the figure given below and write the following :

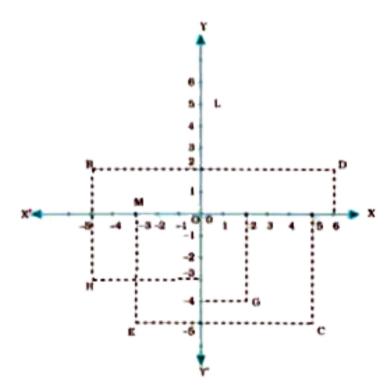
The coordinates of B.





5. See the figure given below and write the following:

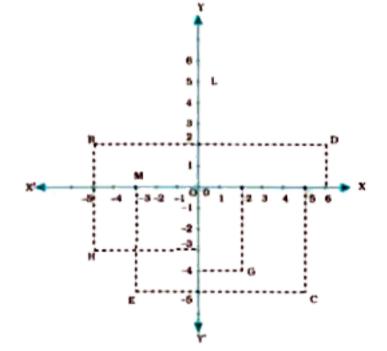
The coordinates of C.





6. See the figure given below and write the following:

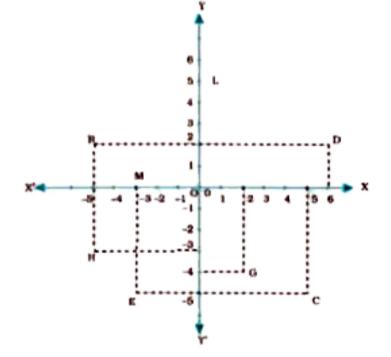
The point identified by the coordinates (-3, -5).





7. See the figure given below and write the following:

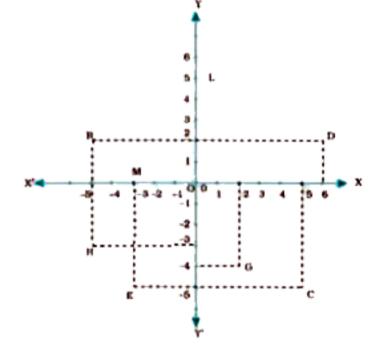
The point identified by the coordinates $(2,\;-4).$





8. See the figure given below and write the following:

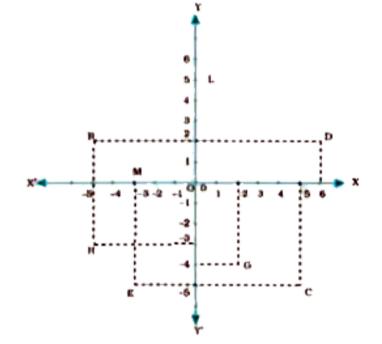
The abscissa of the point D.





9. See the figure given below and write the following:

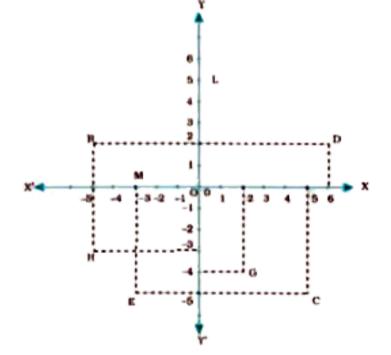
The ordinate of the point H.





10. See the figure given below and write the following :

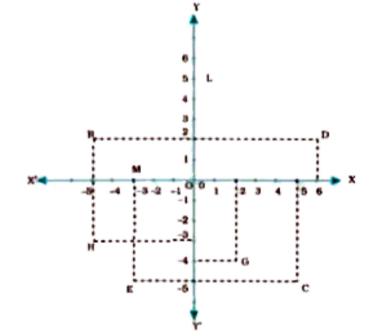
The coordinates of the point L.





11. See the figure given below and write the following:

The coordinates of the point M.





Exercise 3 3

1. In which quadrant or on which axis does each of the points (-2,4),(3,-1),(-1,0),(1,2) and (-3,-5) lie ? Verify

answer by locating them on the Cartesian plane.

| Coordinates of the point | Position of the point | | |
|--------------------------|-----------------------|--|--|
| (-2, 4) | In the 2nd quadrant | | |
| (3, -1) | In the 4th quadrant | | |
| (-1, 0) | On the x-axis | | |
| (1, 2) | In the 1st quadrant | | |
| (-3, -5) | In the 3rd quadrant | | |



2. Plot the points (x, y) given in the following table on the plane, choosing suitable units of distance on the axes :

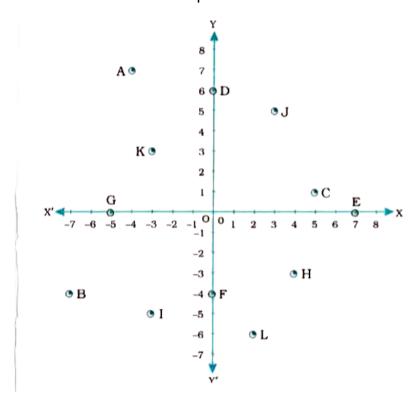
| x | -2 | -1 | 0 | 1 | 3 |
|---|----|----|--------|---|-----|
| y | 8 | 7 | - 1.25 | 3 | - 1 |



Skill Testing Exercise

1. Study the figure given below and answer the following questions:

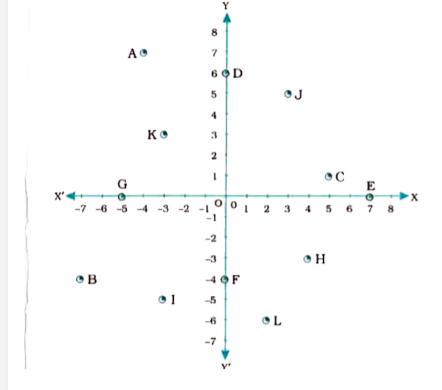
State the coordinates of point A.





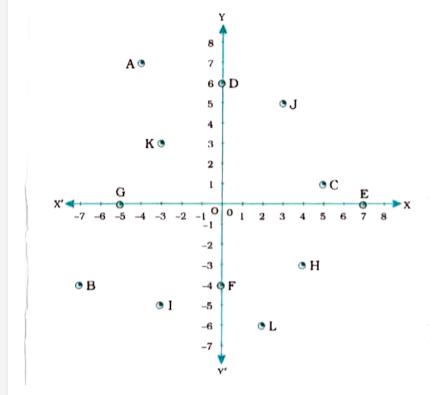
2. Study the figure given below and answer the following questions :

State the y-coordinate of point B.



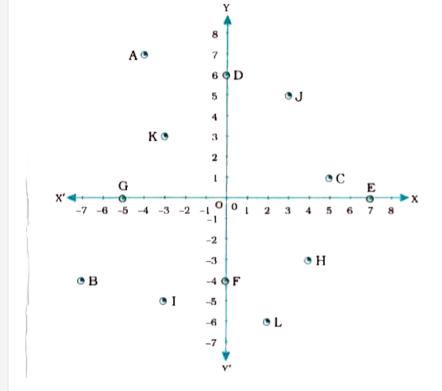


3. Study the figure given below and answer the following questions : State the x-coordinate of point C.



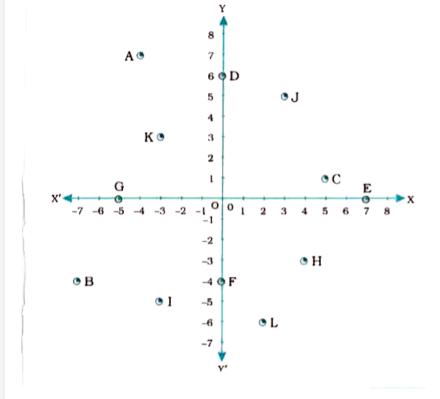


4. Study the figure given below and answer the following questions : Name the point with coordinates (3, 5).





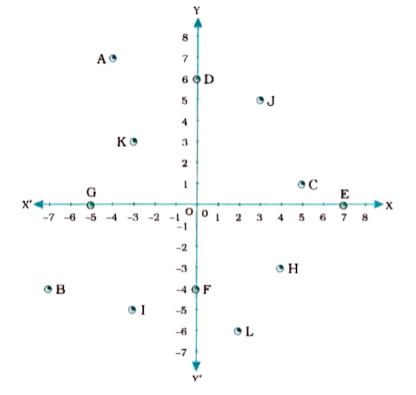
5. Study the figure given below and answer the following questions : Name the point with coordinates $(2,\;-6).$





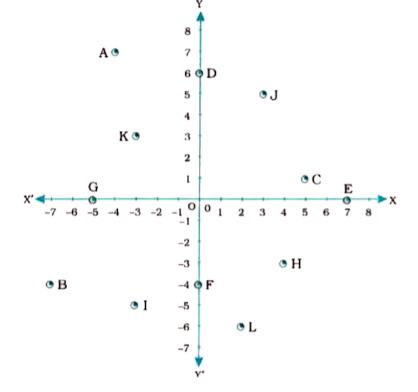
6. Study the figure given below and answer the following questions :

State the coordinates of point D.



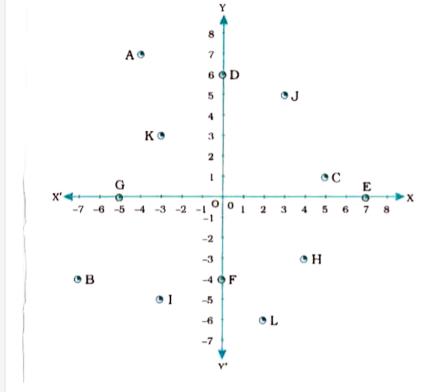


7. Study the figure given below and answer the following questions : State the coordinates of point G.



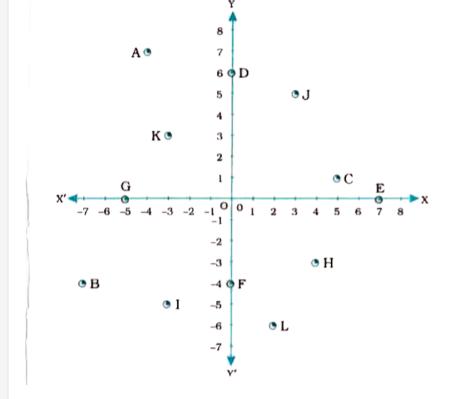


8. Study the figure given below and answer the following questions : State the x-coordinate of point K.





9. Study the figure given below and answer the following questions : State the coordinates of point E.

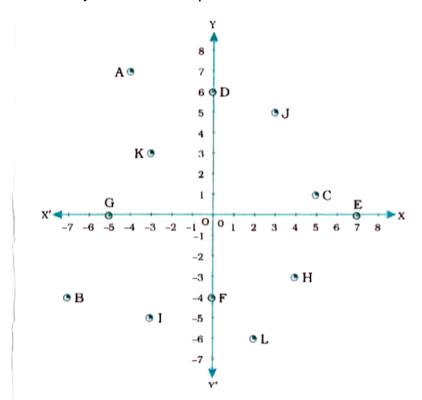




10. Study the figure given below and answer the following questions

:

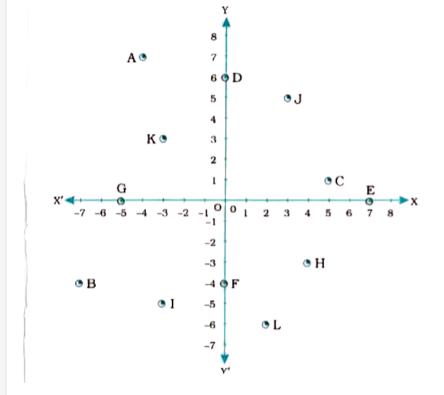
State the y-coordinate of point I.





State the x-coordinate of point H.

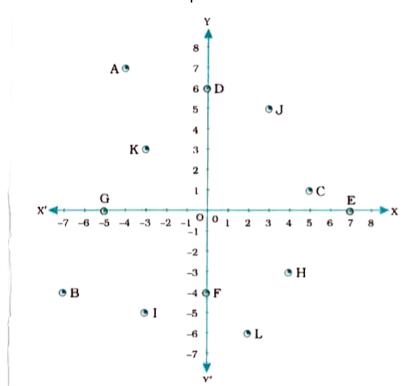
11. Study the figure given below and answer the following questions :





12. Study the figure given below and answer the following questions

State the coordinates of point F.

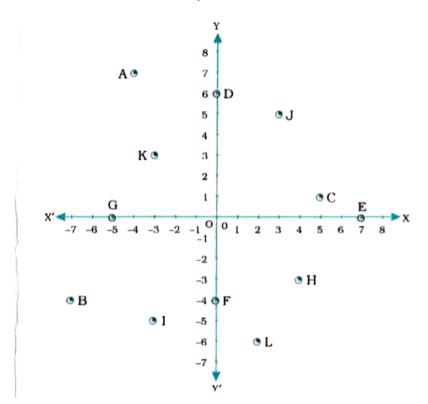




13. Study the figure given below and answer the following questions

:

State the coordinates of point O.





- **14.** State in which quadrant or on which axis does each of the following points lie:
- $(5,\,-3)$, Verify your answer by plotting the points in the Cartesian plane.



15. State in which quadrant or on which axis does each of the following points lie:

$$(\,-3,0)$$

Verify your answer by plotting the points in the Certesian plane.



16. State in which quadrant or on which axis does each of the following points lie:

(5, 2)

Verify your answer by plotting the points in the Certesian plane.



17. State in which quadrant or on which axis does each of the following points lie:

(0, 6)

Verify your answer by plotting the points in the Certesian plane.



18. State in which quadrant or on which axis does each of the following points lie:

(-2,1)

Verify your answer by plotting the points in the Certesian plane.



19. State in which quadrant or on which axis does each of the following points lie:

(5, 0)

Verify your answer by plotting the points in the Certesian plane.



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20. State in which quadrant or on which axis does each of the following points lie:

(0, -3)

Verify your answer by plotting the points in the Certesian plane.



21. State in which quadrant or on which axis does each of the following points lie:

$$(-4, -4)$$

Verify your answer by plotting the points in the Certesian plane.



22. Plot the points (x, y) given in the following table on the plane, choosing suitable units of distance on the axes :

| x | -2 | -1 | 0 | 1 | 3 |
|---|----|----|-------|---|-----|
| y | 8 | 7 | -1.25 | 3 | - 1 |



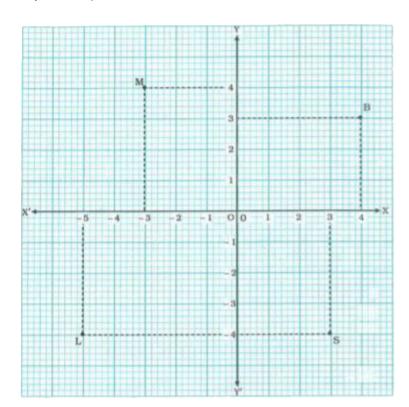
Sums To Enrich Remember

1. See the figure given below and complete the following statements

:

The abscissa and the ordinate of the point B are.....and.......

respectively. Hence, the coordinates of B are (...........).

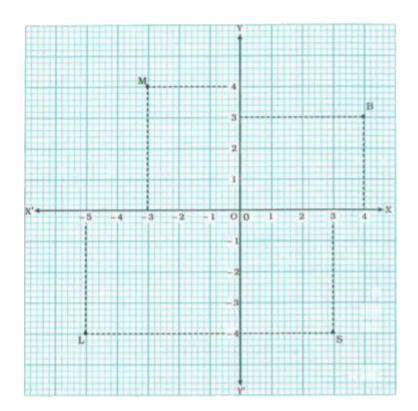




2. See the figure given below and complete the following statements

:

).



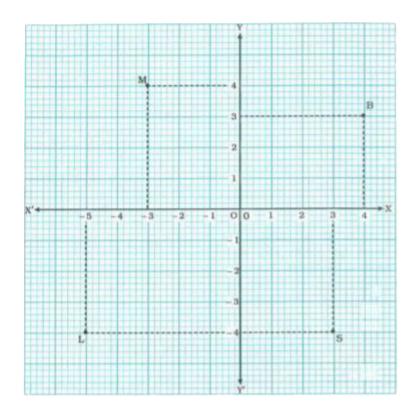


3. See the figure given below and complete the following statements

The x-coordinate and the y-coordinate of the point

are.....respectively. Hence, the coordinates of L are (.....,

.....).

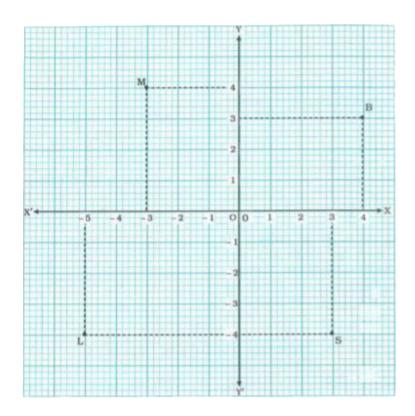




4. See the figure given below and complete the following statements

:

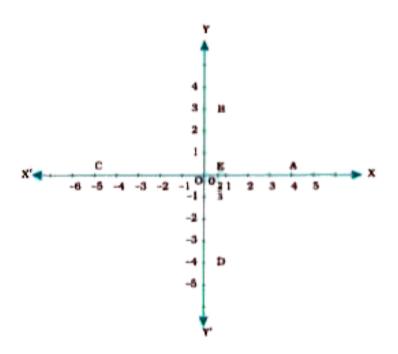
).



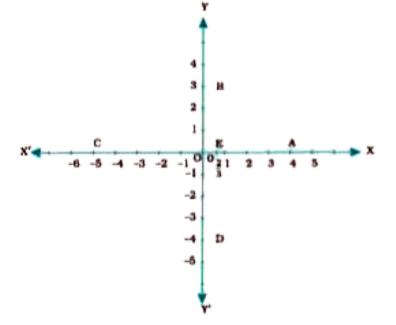


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5. Write the coordinates of the points A marked on the axes in the given figure :



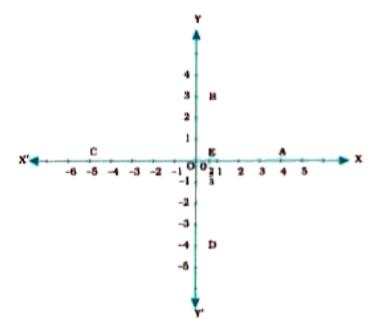
6. Write the coordinates of the points B marked on the axes in the given figure :





7. Write the coordinates of the points marked on the axes in the given figure :

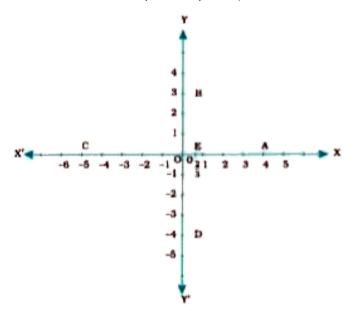
The coordinates of C are $(\,-5,0)$. Why ?





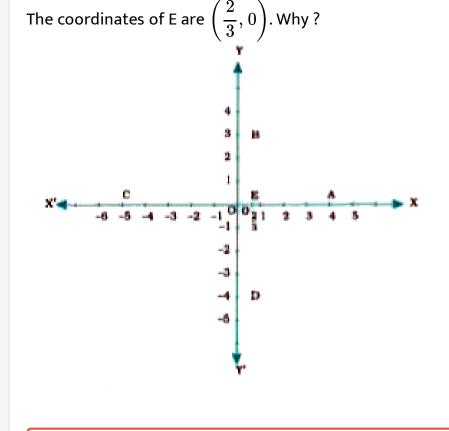
8. Write the coordinates of the points marked on the axes in the given figure :

The coordinates of D are $(0,\;-4)$. Why ?





9. Write the coordinates of the points marked on the axes in the given figure :



the

(5,0), (0,5), (2,5), (5,2), (-3,5), (-3,-5), (5,-3) and (6,1)

points



10.

in the Cartesian plane.

Locate

11. Plot the following ordered pairs (x, y) of numbers as points in the Certersian plane. Use th scale 1 cm = 1 unit on the axes.

| × | -3 | 0 | -1 | -4 | 2 |
|---|----|------|----|----|----|
| y | 7 | -3.5 | -3 | 4 | -3 |



Mcqs

1. Answer each question by selecting the proper alternative from those given below each questions to make the statement true :

For x=2,y=3,u=-2 and v=-3, point (x+y,u+v)

lies in the.....quadrant.

A. first

B. second

C. third

D. fourth

Answer: D



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those given below each questions to make the statement true :

2. Answer each question by selecting the proper alternative from

For x = 4, y = -5, u = -6 and v = 8, point (x + y, u + v)

lies in the.....quadrant.

A. first

B. second

C. third

D. fourth

Answer: B



3. Answer each question by selecting the proper alternative from those given below each questions to make the statement true:

If (x, y) and (y, x) reperesent the same point in the coodinate plane, then......is possible.

A.
$$x = 5, y = 2$$

B.
$$x = 2, y = 5$$

C.
$$x = -5, y = -2$$

D.
$$x = 5, y = 5$$

Answer: D



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4. Answer each question by selecting the proper alternative from those given below each questions to make the statement true :

The line joining P(3, -2) and Q(3, 4).....

- A. is parallel to the x-axis
- B. is parallel to the y-axis
- C. is perpendicular to the y-axis
- D. intersects both the axes

Answer: B



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5. Answer each question by selecting the proper alternative from those given below each questions to make the statement true :

The line joining A(-2,5) and B(-2,-8).....

- A. is parallel to the x-axis
- B. is perpendicular to the x-axis
- C. intersects the y-axis
- D. intersects both the axes

Answer: B



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6. Answer each question by selecting the proper alternative from those given below each questions to make the statement true :

The line joining A(-2,5) and B(3,5) intersects.........

- A. the x-axis at $(\,-2,0)$
- B. the x-axis at (3, 0)
- C. the y-axis (0, 5)
- D. the x-axis (5, 0)

Answer: C



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7. Answer each question by selecting the proper alternative from those given below each questions to make the statement true :

The line joining A(3,2) and (3,-2) intersects..........

- A. the x-axis at (0,3)
- B. the x-axis at (3, 0)
- C. the y-axis (0, 2)
- D. the x-axis (0, -2)

Answer: B



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