**Half mark and one mark questions**

1. What is the general form a linear equation in two variables?
2. What is simple equation?
3. How many solution a linear equation in two variables have?
4. What is the graph of a linear equation in two variables?
5. If c = 0, then what can you say about the graph of the linear equation ax + by + c = 0?
6. Write the general form of a linear equation which passes through the origin?
7. What is the value of ‘k’ if (6, k) lies on the line represented by the equation 3x + y = 22?
8. Write two linear equations in two variables having same solution (-3, 2)?
9. When does the equation 2x + 5y = 7 have a unique solution?
10. Given (2, 3) is a solution of the equation ax + by + c = 0. Then what will be the solution of the equation 3ax + 3by + 3c = 0?
11. What is the equation of the line parallel to Y-axis?
12. What is the equation of the line perpendicular to X-axis?
13. Write the equation of the line which is perpendicular to Y-axis and passing through the point (h, k)?
14. Express the following statement as a linear equation in two variables x and y? “The cost of a ball pen is 5 rupees more than half of the cost of a pencil”.
15. What is the distance between the points (3, -4) and (3, 1)?
16. Find the area of the triangle formed by the points (0, 0), (0, 4) and (3, 0)?
17. Where did the graph of the equation = 1 interest the Y-axis?
18. The graph of y = mx + c intersects X-axis at \_\_\_\_\_\_\_\_\_

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| --- | --- | --- | --- | --- | --- |
| x | 0 | 1 | 2 | 3 | 4 |
| y | 2 | 4 | 6 | 8 | 10 |



Write the equation which represent the coordinate points given in the table?

(20 to 24) Read the following and answer the questions?

A (2, -3), B (0, 0), C (4, 0), D (-4, -3), E (0, -7), F (-2, 5), G (2, 4)

1. Which points lie on X-axis?
2. Which points lie on the line parallel to Y-axis?
3. Which points are solutions of the equation 2x + y = 1?
4. Are the points A and D collinear?
5. Which points do not lie on any axes?
6. What is the distance between the graphs of the equations y = 4 and y = -4?
7. What is the shape of the quadrilateral formed by the lines x = 3, y = -3, x = 0 and y = 0?
8. Express the equation = y in the form of ax + by + c = 0?
9. What is the degree of the linear equation in two variables?
10. John said, “(x + 3)² = x² + 5x – 4 is not a linear equation because of degree 2”. Can you agree with him?
11. What is the equation of X-axis?
12. Is (-3, 7) solution of the equation 2x + y = 10?
13. Write the general form of a point which lie on Y-axis?
14. Express the equation x + 2y = 5 in statement form?
15. Express ‘y’ in terms of x in the equation 2x – 3y = 7?
16. What can you say about the graph of the linear equation y = 3x?
17. What is the common property of the graphs of the equations y = 2x + 5 and y = 7x + 5?
18. “There are infinitely many equations having the same solution (3, 2)”. How?. Explain.
19. Where does the graph of linear equation 3x – 5y = 8 cuts the Y-axis?
20. Express the equation x = -5 in two variables?
21. Write the form of any point which lie on the equation x – y = 0?
22. How many linear equations in x and y can be satisfied by x = 1 and y = 4?
23. The point of the form (a, -a) always lies on \_\_\_\_\_\_\_-
24. x = a B) y = -a C) x – y = 0 D) x + y = 0
25. Determine the point on the graph of the linear equation 2x + 3y = 8, whose y coordinate is 4?
26. Write the linear equation such that each point on its graph has y coordinate 4 times its x coordinate?
27. How many solutions are there to the equation y = -4 in Cartesian plane?
28. If b = 0, then what is the position of the graph of linear equation ax + by + c = 0?
29. What is the angle between the line x = 5 and y = -3?
30. Find the perimeter of the figure formed by the lines x = 3, x = -1, y = 4 and y = 1?
31. Write a linear equation having the solution (-3, 4)?
32. If the graph of the equation y = mx + 3 passes through the point (1, -5), then find the value of ‘m’?

**Two marks questions**

1. If x = 2 – k and y = 2 + k is a solution of the equation 7x + 3y = -2 then find the value of ‘k’?
2. Find three different solutions of the equation x + 3y – 5 = 0?
3. Draw the rough sketch of the graph of the equation x = 3y + 1?
4. If (a, 2) is a solution of the equation 2x + 3y + a = 0 then find two solutions of the equation 3x – ay + 2 = 0?
5. “The cost of 2 pencils is same as the cost of 5 erasers”. Express the statement as linear equation in two variables?

For this question, Preethi wrote the answer as 2x – 5y = 0, Janshi wrote 5x – 2y = 0 and shekar wrote y = . Who is correct? Justify your answer.

1. Find the value of ‘k’ if is a solution of x = 3y = k?
2. Solve the equation 3x + 5 = 2x – 7 and represent the solution on the Cartesian plane?
3. Write the equation of four lines that are parallel to the X-axis and parallel to the Y-axis?
4. Find the points where the graph of the equation 2x + 3y = 5 cuts the X-axis and the Y-axis?
5. At what point does the graph of the linear equation x + y = 5 meet a line which is parallel to the Y-axis, at a distance 2 units from the origin and in the positive direction of X-axis?
6. Determine the point on the graph of the equation 2x + 5y = 20 whose x-coordinate is 5/2 times its y-coordinate?
7. Find the solution of the linear equation 2x + y = 8 which represents a point on X-axis and on Y-axis?
8. For what value of ‘k’, the linear equation 2x + ky = 8 has equal values of x and y for its solutions?
9. Let x is directly proportional to y and if x = 12 when y = 8, then write a linear equation. What is the value of y when x = 3?
10. If (3, -2) is a common solution of the equations 3x + ay = 7 and x – by + 1 = 0, then find the value of (a + b)²?

**Four marks questions**

1. A fraction (x ≠ 0 and y ≠ 0) becomes if 2 is subtracted from the numerator and 4 is added to denominator. Write a linear equation to this information and find two fractions which satisfies the given information?
2. If the work done by body o application of a constant force is directly proportional to the distance travelled by the body. Express this in the form of an equation in two variables and draw the graph of the same by taking the constant force as 5units. Also from the graph find the work done when the distance travelled by the body is 2 units and 0 units?
3. From a bus stand in Vijayawada, if we buy 2 tickets to Eluru and 3 tickets to Uyuru, the total cost is 46 rupees. Express this information as a linear equation in two variables and draw the graph. And also find the total cost if we buy 3 tickets to Eluru and 5 tickets to Uyuru?
4. Give geometrical representation of 3x + 12 = 0 as an equation
5. In one variable
6. In two variables.
7. Balu tells to his daughter, “Seven years ago, I was seven times as old as you were then also, t three years from now, I shall be three times as old as you will be”. If the present ages of daughter and Balu are x and y years respectively, represent this situation algebraically?
8. Draw the graph of the equation 2x + y = 6 and find the sum of intercepts of the line with the coordinate axes?
9. Draw the graph of the equation y = 4x? What can you notice?
10. Draw the graph of the equation 2x + 3y = 6 and from the graph, find the following?
11. The value of y if x = 3
12. The value of x if y = -2

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| x | 6 | -6 |
| Y | -2 | 6 |

1. The following observed values of x and y are thought to satisfy a linear equation. Write the equation.

Draw the graph using the values of x and y as given in the above table. At what points the graph of the linear equation cuts (i) X-axis (ii) Y- axis?

1. The Autorikshaw fare in a city is charged Rs. 10 for the first kilometer and Rs. 4 per kilometer for subsequent distance covered. Write the linear equation to express the above statement. Draw the graph of the linear equation?