MATHS

BOOKS - MODERN PUBLICATION

LINEAR EQUATIONS IN TWO VARIABLES

Example

1. Write each of the following linear equations in the form

ax+by+c=0 and indicate the value of a,b and c

in each case

3x+4y=5.27

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2. Write each of the following linear equations

in the form

ax+by+c=0 and indicate the value of a,b and c

in each case

$x - 5 = \sqrt{3}y$

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3. Write each of the following linear equations in the form

$ax+by+c=0$ and indicate the value of a,b and c in each case

$5=6x-7y$

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4. Write each of the following linear equations in the form

$ax+by+c=0$ and indicate the value of a,b and c

in each case

$3x=y$

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5. Check which of the following are solutions of the equations $2x-y=4$ and which are not:

$(0,-4)$

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6. Check which of the following are solutions of the equations 2x-y=4 and which are not:

(3,0)

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7. Check which of the following are solutions of the equations 2x-y=4 and which are not:

(3,2)

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8. Check which of the following are solutions of the equations $2x-y=4$ and which are not:

(2,2)

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9. Find four different solutions of the equations

$2x+y=6$

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10. If x=2,y=1 is a solution 3x+2y=k, find the value of k.

11. If x=2k-1 and y=k is a solution of the 3x-5y-9=0 find the value of k.

12. Find the solutions of form $x = a, y = 0$ and $x = 0, y = b$ for the following pairs of

equations. Do they have any common such solution ? $7x + 3y = 42$ and $2x + 5y = 12$.

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13. Draw the graph of the equations y-x=3.

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14. Draw graph of the equations 2x+3y=11 from the graph, find the value of y, when x=2.

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15. Draw the graphs of $3x-2y=4$ and $x+y-3=0$ in the same graph. Also, find the point of intersection of these lines.

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16. Draw the graph of the equations $x+2y=8$ form the graph, check whether $(-1,-2)$ is a solution of equations.

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17. Draw the graph for 4x-3y=12 and determine the

points of intersection of this line with the coordinate of axes.

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18. Draw the graph for 4x-3y=12 and determine the

area of the triangle bounded by this line and ordinates areas.

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19. Cost of 7 pens and 8 pencils is Rs 87 and cost of 6 pens and 4 pencils is Rs 66. write linear equations representing the above data. Also, find the cost of 1 pen and 1 pencil.

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20. The taxi fare in a city is as follows : For the first kilometre, the fare is Rs.8 and for the

subsequent distance it is Rs.5 per kilometre. Taking the distance covered as x km and total fare as Rs.y, write a linear equation for this information and draw its graph.

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21. Draw the graph of each of the following:

y=0

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22. Draw the graph of each of the following:

$x=3$

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23. Draw the graph of each of the following:

$y=4$

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24. Draw the graph of each of the following:

$x+3=0$

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25. Draw the graph of each of the following:

$y+2=0$

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26. Draw the graph of the linear equations

$2x+4=3x+1$

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27. Draw the graph of the linear equations

$2y+3=9$

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28. Solve the equation $2x + 1 = x - 3$, and represent the solution(s) on (i) the number line, (ii) the Cartesian plane.

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29. Solve the equation $2x + 1 = x - 3$, and represent the solution(s) on (i) the number line, (ii) the Cartesian plane.

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30. Two numbers are such that greater of two is 5 less than twice of the smaller. Express this information in equatins form.

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31. If a driver drives at the rate of 32 km/h, he reaches his destinatin 7 minutes late. If the drives at the rate of 35km/h he reaches 4 minutes earlier. How far is his destination?

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32. In a company a man invested Rs 38000, a part of it at an annual interest of 10% and rest at a rate of 15%. If he received a total intereset of Rs 5500, how much did he invest in each plane

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33. The perimeter of a rectangle is 632 m. express this information in the form of a linear equaiton in two variables.

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34. On her birthday Shushma distributed ladoos in an orphanage.she gave 2 ladoos to each child and 50 ladoos to adult. Taking number of children as x and total ladoos distributed as y:

What values are shown by Shushma?

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35. On her birthday Shushma distributed ladoos in an orphanage. She gave 2 ladoos to each child and 50 ladoos to adult. Taking number of children as x and total ladoos distributed as y:

If she distributed 132 ladoos in all, then find the number of children in the orphanage.

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36. On her birthday Shushma distributed ladoos in an orphanage.she gave 2 ladoos to each child and 50 ladoos to adult. Taking number of children as x and total ladoos distributed as y:

What values are shown by Shushma?

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37. Rajesh and Kunal, two students of class, together contributed Rs 100 for old age home

to help old people left by their children. Write a linear eqution, which satisfies the data.

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38. The cost of a notebook is twice the cost of a pen. Write a linear equation in two variables to represent this statement.

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39. Express the following linear equations in the form ax+by+c=0 and indicate the values of a,b and c in each case

$2x + 3y = 9.\overline{35}$

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40. Express the following linear equations in the form ax+by+c=0 and indicate the values of a,b and c in each case

$x - \frac{y}{5} - 10 = 0$

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41. Express the following linear equations in the form ax+by+c=0 and indicate the values of a,b and c in each case

$-2x + 3y = 6$

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42. Express the following linear equations in the form ax+by+c=0 and indicate the values of

a,b and c in each case

x=3y

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43. Express the following linear equation in the form ax + by + c = 0 and indicate the values of a, b and c in each case. $2x = -5y$.

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44. Express the following linear equations in the form ax+by+c=0 and indicate the values of a,b and c in each case

3x+2y=4

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45. Express the following linear equation in the form ax + by + c = 0 and indicate the values of a, b and c in each case. $y - 2 = 0$.

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46. Express the following linear equations in the form ax+by+c=0 and indicate the values of a,b and c in each case

5=2x

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47. Which one of the following option is true and why?

y=3x+5 has: a unique solution?

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48. Which one of the following option is true and why?

y=3x+5 has: only two solutions.

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49. Which one of the following option is true and why ? $y = 3x + 5$ has

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50. Write four solutions for each of the following equations:

$3x + 4y = 7$

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51. Write four solutions for each of the following equations:

$x + \pi y = 4$

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52. Write four solutions for each of the following equations: $x = 4y$

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53. Check whether of the following are solutions of the equations x-2y=4 and which are not?

(0,2)

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54. Check whether of the following are solutions of the equations x-2y=4 and which are not?

(2,0)

Watch Video Solution

55. Check whether of the following are solutions of the equations x-2y=4 and which are not?

(4,0)

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56. Check whether of the following are solutions of the equations x-2y=4 and which are not?

$(\sqrt{2}, 4\sqrt{2})$

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57. Check whether of the following are solutions of the equations x-2y=4 and which

are not?

(1,1)

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58. Draw the graph of each of the following linear equations in two variables:

x+y=4

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59. Draw the graph of each of the following linear equations in two variables: $x-y=2$

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60. Draw the graph of each of the following linear equations in two variables: $y=3x$

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61. Draw the graph of each of the following linear equations in two variables: $3 = 2x + y$

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62. Give the equations of two lines passing through (2, 14). How many more such lines are there, and why?

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63. If the point (3, 4) lies on the graph of the equation $3y = ax + 7$, find the value of a.

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64. The taxi fare in a city is as follows : For the first kilometre, the fare is Rs.8 and for the subsequent distance it is Rs.5 per kilometre. Taking the distance covered as x km and total fare as Rs.y, write a linear equation for this information and draw its graph.

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65. From the choices given below, choose the equation whose graphs are given :-For Fig. 4. 6

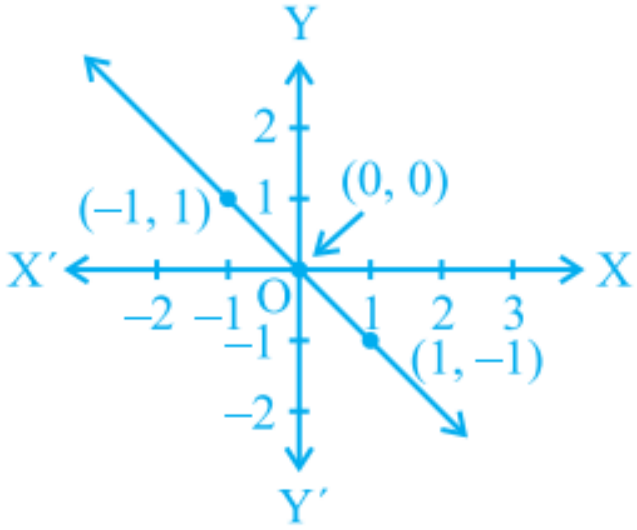

Fig. 4.6

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66. If the work done by a body on 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 5 units. Also read from the graph the work done when the distance travelled by the body is :-2 units

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67. If the work done by a body on 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 6 units. Also read from the graph the work done when the distance travelled by the body is:- 0 unit

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68. Yamini and Fatima, two students of Class IX of a school, together contributed ₹ 100 towards the Prime Minister's Relief Fund to help the earthquake victims. Write a linear equation which satisfies this data. (You may take their contributions as ₹ x and ₹ y.) Draw the graph of the same.

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69. In countries like USA and Canada, temperature is measured in Fahrenheit, whereas in countries like India, it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius: $F = \left(\frac{9}{5}\right)C + 32$ Draw the graph of the linear equation above using Celsius for x-axis and Fahrenheit for y-axis.

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70. In countries like the USA and Canada, temperature is measured in Fahrenheti whereas in countries like India it is measured in Celsius. Here is alinear equation that converts Fahrenheit to Celsius:

$$F = \left(\frac{9}{5}\right)C + 32$$

If the tempearature is $30^\circ C$, what is the temperature in Fahrenheit?

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71. In countries like the USA and Canada, temperature is measured in Fahrenheti whereas in countries like India it is measured in Celsius. Here is alinear equation that converts Fahrenheit to Celsius:

$$F = \left(\frac{9}{5}\right)C + 32$$

If the temperature is $95^\circ F$, what is the temperature in Celsius?

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72. In countries like USA and Canada, temperature is measured in Fahrenheit, whereas in countries like India, it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius: $F = \left(\frac{9}{5}\right)C + 32$ Is there a temperature which is numerically the same in both Fahrenheit and Celsius? If yes, find it.

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73. In countries like USA and Canada, temperature is measured in Fahrenheit, whereas in countries like India, it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius: $F = \left(\frac{9}{5}\right)C + 32$ If the temperature is $0^\circ C$, what is the temperature in Fahrenheit and if the temperature is $0^\circ F$, what is the temperature in Celsius?

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74. Give the geometric representation of y = 3 as an equation in one variable.

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75. Give the geometric representation of y = 3 as an equation in two variables.

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76. Give the geometric representation of $2x + 9 = 0$ as an equation in one variable.

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77. Give the geometric representation of $2x + 9 = 0$ as an equation in two variable.

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78. Write whether the following statement is True or False ? Justify your answers : The point (0, 3) lies on the graph of the linear equation $3x + 4y = 12$.

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79. Write whether the following statement is True or False ? Justify your answers : The graph of the linear equation $x + 2y = 7$ passes through the point (0, 7).

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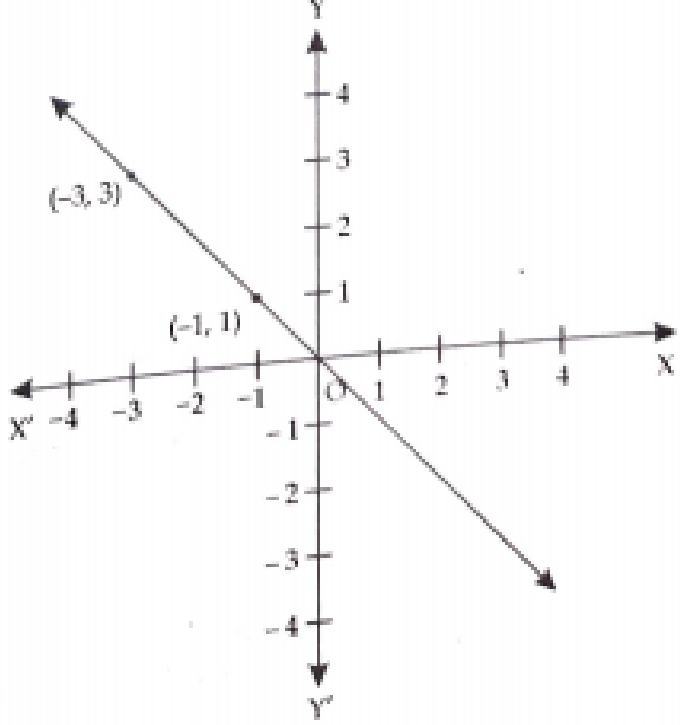
80. The grpah given below represents the linear equations x+y=0



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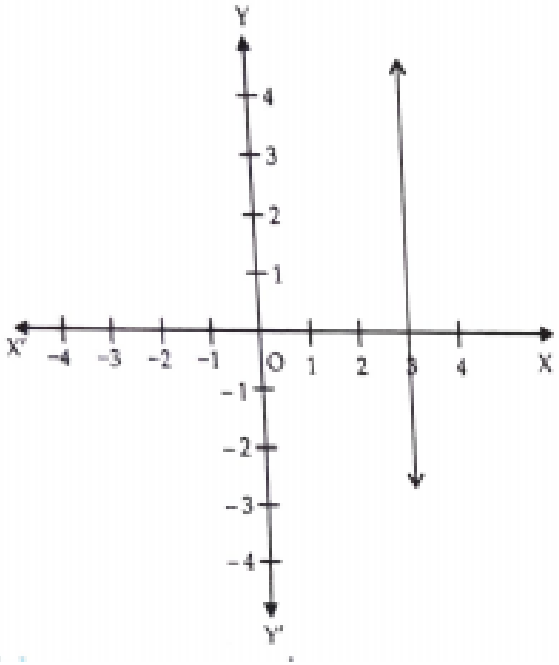
81. The graph is given below represents the linear equations x=3.



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82. The coordinates of points in the table:

x	0	1	2	3	4
y	2	3	4	−5	6

represent some of the solutions of the equations x+y+2=0

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83. Write whether the following statement is True or False ? Justify your answers : Every

point on the graph of a linear equation in two variables does not represent a solution of the linear equation.

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84. Write whether the following statement is True or False ? Justify your answers : The graph of every linear equation in two variables need not be a line.

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85. Draw the graphs of linear equations of $y=x$ and $y=-x$ on he same cartesian plane. What you observe?

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86. Determine the point of the graph of the line equations $2x+5y=19$, whose ordinate is $3/2$ times its abscissa.

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87. Draw the graph of the equations represented by a straight line which is parallel to the x-axis and at a distance of 3 units below it.

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88. Draw the graph of the linear equations whose solutions are represented by the points having the sum of the coordinates as 10 units.

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89. If the point (3, 4) lies on the graph of the equation $3y = ax + 7$, find the value of a.

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90. How many solutions of the equations 2x+1=x-3 are there on the:

number line?

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91. How many solutions of the equations 2x+1=x-3 are there on the:

number line?

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92. Find the solutions of the linear equations $x + 2y = 8$ which represents a point on

x-axis?

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93. Find the solutions of the linear equations $x+2y=8$ which represents a point on y-axis?

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94. Write the linear equation such that each point on its graph has an ordinate 3 times its abscissa.

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95. For what natural number c, the linear equations $2x+cy=9$ has equal values of x and y for its solutions.

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96. Let y vary directly as x. if $y=12$ when $x=4$, then write a linear equation, what is the value of y when $x=5$?

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97. Show that the points $A(1, 2), B(-1, -16)$ and $C(0, -7)$ lie on the graph of the linear equation $y = 9x - 7$.

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98. The following observed values of x and y are thought to satisfy a linear euations. Write the linear equations.

x	6	-6
y	-2	6

Draw the graph using the values of x, y given in the above table

At what points the graph of the linear equations:

cuts the x-axis.

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99. The following observed values of x and y are thought to satisfy a linear euations. Write the linear equations.

x	6	-6
y	-2	6

Draw the graph using the values of x, y given in the above table

At what points the graph of the linear equations:

cuts the y-axis.

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100. Draw the graph of the linear equations 3x+4y=6. At what points, the graph cuts x-axis and y-axis.

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101. The linear equations that converts Fahrenheit to Celsius is given to the relations:

$$C = \frac{5F - 160}{9}$$

If the temperature is $86^\circ F$, what is the temperature in Celsius?

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102. The linear equations that converts Fahrenheit to Celsius is given to the relations:

$$C = \frac{5F - 160}{9}$$

If the temperature is $35^\circ C$, what is the temperature in Farenheit?

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103. The linear equations that converts Fahrenheit to Celsius is given to the relations:

$$C = \frac{5F - 160}{9}$$

If the temperature is $0^\circ C$, what is the temperature in Fahrenheit and f the temperature is $0^\circ F$, what is the temperature in Celsius?

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104. The linear equations that converts Fahrenheit to Celsius is given to the relations:

$$C = \frac{5F - 160}{9}$$

What is the numerical value of the temperature which is same in both the scales?

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105. If the temperature of a liquid can be measured in Kelvin units as $x^\circ K$ or in Fahrenheit units as $y^\circ F$. The relation between the two systems of measurement of temperature is given by the linear equations

$$y = \frac{9}{4}(x - 273) + 32.$$

Find the temperature of the liquid in Fahrenheit if the temperature of the liquid is $313^\circ K$.

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106. If the temperature of a liquid can be measured in Kelvin units as $x^\circ K$ or in Fahrenheit units as $y^\circ F$. The relation between the two systems of measurement of temperature is given by the linear equations $y = \frac{9}{4}(x - 273) + 32$.

If the temperature is $158^{\circ} F$, then find the temperature is Kelvin?

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107. The force exerted to pull a cart is directly proportional to the acceleration produced by the body. Express the statement as a linear equation of two variables and draw the graph of the same by taking the constant mass equal to 6kg. Read from a graph, the force required

when the acceleration produced as:

$5\frac{m}{\sec^2}$

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108. The force exerted to pull a cart is directly proportional to the acceleration produced by the body. Express the statement as a linear equation of two variables and draw the graph of the same by taking the constant mass equal to 6kg. Read from a graph, the force required

when the acceleration produced as:

$6\frac{m}{\sec^2}$

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Exercise

1. Check whether of the following are solutions of the equaions 2x-y=8 and which are not:

(0,8)

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2. Check whether of the following are solutions of the equaions 2x-y=8 and which are not:

(0,8)

3. Check whether of the following are solutions of the equaions 2x-y=8 and which are not:

(1,-6)

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4. Check whether of the following are solutions of the equaions 2x-y=8 and which are not:

(2,-3)

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5. Write four solutions for each of the following equations:

x=6y?

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6. Write four solutions for each of the following equations:

$x + \pi y = 4$

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7. Write four solutions for each of the following equations:

$3x + 4y = 7$

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8. Write four solutions for each of the following equations:

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

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9. Find four different solutions of the equation

$x + 2y = 6$.

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10. If x=1,y-2 is a solution of 2x+3y=k, find the value of k.

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11. If x=-k and $y = \frac{5}{2}$ is a solution of x+4y-7=0 find the value of k.

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12. If x=1 and y=6 is a solution of $8x - ky + k^2$ find the value of k.

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13. Write the two solutions in the form x=0,y=a and x=b,y=0 for each of the following equations

2x+3y=24

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14. Write the two solutions in the form $x=0, y=a$ and $x=b, y=0$ for each of the following equations

$5x-2y=10$

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15. Write the two solutions in the form $x=0, y=a$ and $x=b, y=0$ for each of the following equations

$4x-3y+12=0$

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16. Draw the graph of each of the following equations

$y=x$

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17. Draw the graph of each of the following equations

$y=-x$

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18. Draw the graph of each of the following equations

$y+2x=0$

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19. Draw the graph of each of the following equations

$3x+5y=15$

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20. Draw the graph of each of the following equations

2x-3y=0

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21. Draw the graph of each of the following equations

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

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22. Draw the graph of the following $y=4x$, from the graph find the value of y when $x=-2$.

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23. Draw the graph of the equations $2x+3y=6$. find the coordinates of the point, where the graph cuts the y-axis.

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24. Draw the graph of the line x-2y=3. from the graph find the coordiates of the point when x=0.

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25. Draw the graph of the line x-2y=3. from the graph find the coordiates of the point when y=-5

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26. Draw the graphs of $3x-2y=4$ and $x+y-3=0$ in the same graph. Also, find the point of intersection of these lines.

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27. Draw the graph of the equations $6x+3y=4$ and check whether:

$x=2, y=5$?

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28. Draw the graph of the equations $6x+3y=4$ and check whether:

$x=-1, y=3$.

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29. Draw the graphs of $3x-2y=4$ and $x+y-3=0$ in the same graph. Also, find the point of intersection of these lines.

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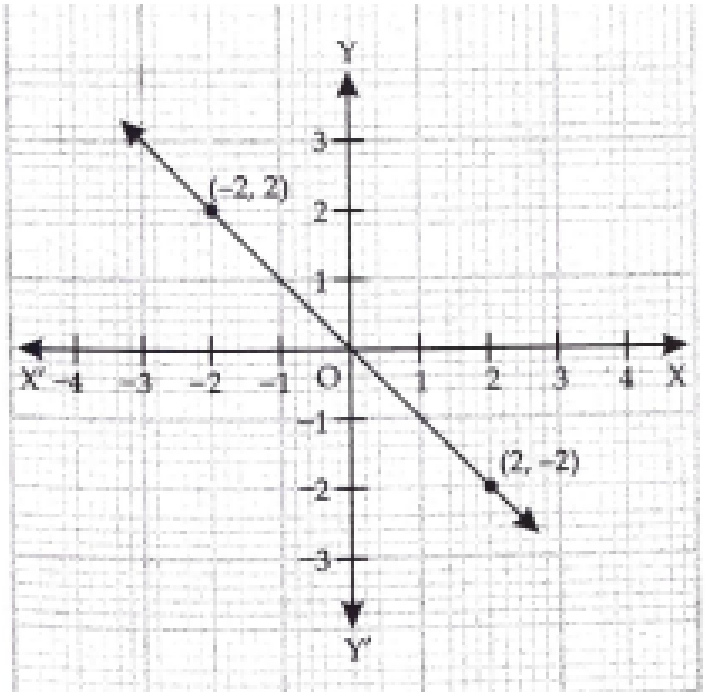
30. From the choices given below, choose the equations whose graph is given in the following figure



A. 1) $x + y = 0$

B. 2) $x - y = 0$

C. 3) $2x + y = 0$

D. 4) $x + 2y = 0$

Answer:

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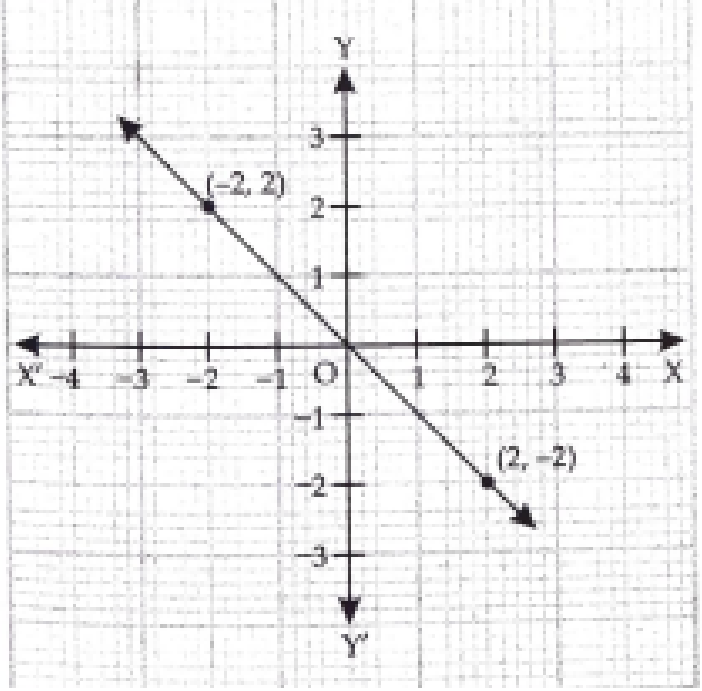
31. From the choices given below, choose the equations whose graph is given in the following figure



y=2x

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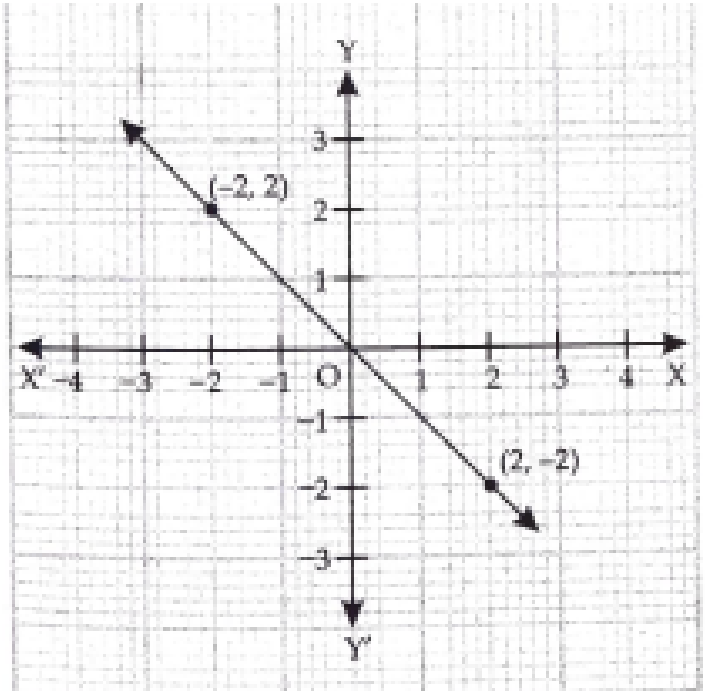
32. From the choices given below, choose the equations whose graph is given in the

following figure



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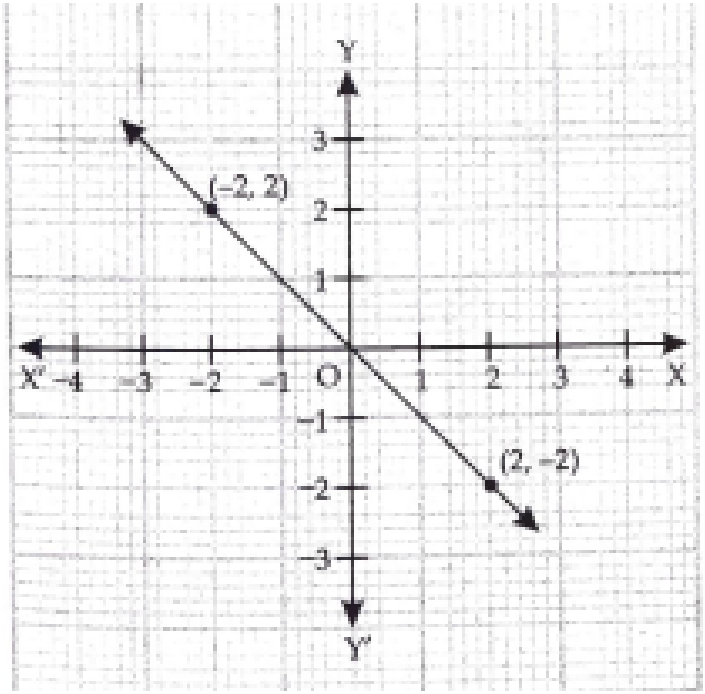
33. From the choices given below, choose the equations whose graph is given in the

following figure



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34. Draw the graph of equations $\frac{x}{3} + \frac{y}{4} = 1$.

Also find the area of the traingle formed by

the line and the coordinate axes.

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35. Kavita and Kavia, two students of ClasS IX of a school, together contributed Rs 100 towards Prime Minister's found to help flood victims. Write a linear equatoins, which satisfies this data and draw the graph of the same.

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36. A number is 27 more than the number obtained by reserving its digits. If its unis and ten's digit are x and y respectively. Write the linear equations representing the above equations and draw its graph.

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37. Draw the graph of $2x+y=6$ and $2x-y+2=0$ shade the region bounded by these lines and x-axis. Find the area of the shaded region.

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38. Draw the graphs of x-y=1 and 2x+y=8. shade the region bouded by these lines and y-axis. Find the area of the shaded region.

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39. Aftab tells his daughter, “Seven years ago, I was seven times as old as you were then. Also, three years from now, Ishall be three times as old as you will be” (Isn’t this interesting ?).

Represent this situation algebraically and graphically

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40. Draw the graph of each of the following:

$x=3$

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41. Draw the graph of each of the following:

$y=4$

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42. Draw the graph of each of the following:

$y+2=0$

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43. Draw the graph of each of the following:

$x+3=0$

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44. Draw the graph of the each of the following,

$2x+7=0$

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45. Draw the graph of the each of the following,

$2y+5=0$

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46. Give the geometric representation of $2x + 9 = 0$ as an equation in one variable.

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47. Give the geometric representation of $2x + 9 = 0$ as an equation in two variable.

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48. Write the equation of the line which is parallel to x-axis and passing through

(0,2)

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49. Write the equation of the line which is parallel to x-axis and passing through

(0,-3)

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50. Write the equation of the line which is parallel to x-axis and passing through

(2,3)

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51. Write the equations of the line, which is parallel to y-axis and passing through

(5,0)

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52. Write the equations of the line, which is parallel to y-axis and passing through

(-3,0)

Watch Video Solution

53. Write the equations of the line, which is parallel to y-axis and passing through

(3,5)

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54. Solve the equations 3y+2=y-8 and represent the solution in

the number line.

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55. Solve the equation $2x + 1 = x - 3$, and represent the solution(s) on (i) the number line, (ii) the Cartesian plane.

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56. Write the equation of x-axis.

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57. Write he equations of y-axis.

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58. Write the equations of a line passing through the point (0,3) and parallel to x-axis.

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59. Write the equations of aline passing through the point (4,6) and parallel to y-axis.

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60. A line passes through the point (-5,5) and parallel to x-axis. Find its equation.

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61. Express the $\frac{2x}{3} + \frac{y}{6} - 5 = 0$ in the form of ax+by+c=0

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62. Write the equations of a line passing through the point (0,3) and parallel to x-axis.

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63. For what value of k does the point (k,-3) lie on the line 3x-y=6?

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64. If x=3 and y=-2 satisfy $2x - 3y = k$, then find the value of k.

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65. Give the equations of two lines passing through (2, 14). How many more such lines are there, and why?

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66. Solve $2x+3=3x-2$ and represent the solution on the number line.

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67. Solve $y+1=2y-1$ and represent the solution on the coordinate plane.

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68. If the point $(a,2)$ lies on the graph of the equations $2x=3y-8$, find the value of a.

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69. Write equations of three lines which pass through (0,0)

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70. Find the value of k if x = 2, y = 1 is a solution of the equation 2x + 3y = k.

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71. Write three solutions of x=0.

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72. For equation $6x - 5y = 8$, verify that (3,2) is a solution.

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73. Find two solutions of 3x+4y=12.

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74. Find the point, where the graph of the line

4x+3y=12 cuts the x-axis.

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75. find the point, where the graph of the line

$4x + 3y = 12$ cuts the y-axis.

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76. How many linear equatins in x and y can be satisfied by x=2, y=3?

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77. Find four different solutions of the equation x + 2y = 6.

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78. Draw the graph of the linear equations

$x+y=9$

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79. Give the geometric representation of $y=4$ as equations

in one variable.

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80. Give the geometric representation of y=4 as and equations in two variables.

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81. Give the geometric representation of $2x + 9 = 0$ as an equation in one variable.

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82. Give the geometric representation of $2x + 9 = 0$ as an equation in two variable.

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83. Write whether the following statement is True or False ? Justify your answers : The point (0, 3) lies on the graph of the linear equation $3x + 4y = 12$.

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84. The graph of x=-2 passes through (2,-2)

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85. The number of solutions of 2x+7=x+3 on the number line is infinite.

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86. $\frac{1}{x}+\frac{1}{y}=2$ is a linear equation in two variables?

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87. The graphs of two equations $x=-2$ and $y=3$ are parallel to each other.

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88. The graph of two equations $x=2$ and $x=-3$ are parallel to each other.

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89. The linear equations $3x+1=2$ has one solutions.

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90. The y-intercept of the line $2x+3y=4$ is

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91. The x-intercept of the line $2x+3y=4$ is 2.

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92. Two variables, which are directly proportionaql to each other always give a linear relationship.

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93. Fill ups

A linear equation is one variable has.....solution.

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94. Fill ups

y=0 is the equations of.....axis.

Watch Video Solution

95. Fill ups

Any point on the line y=3 is of the form..... .

Watch Video Solution

96. The ordinate of any point on x-axis is

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97. Fill ups

x=0 represents .....axis while y=0 represents.....axis.

Watch Video Solution

98. Fill ups

Geometrical figure enclosed x-y=1 lies on all quadrants except.....quadrant.

 Watch Video Solution

99. Fill ups

Two lines represented by y=x and y=-x have a common solution.

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100. Fill ups

.....points are sufficeints to draw a straight line.

Watch Video Solution

101. Fill ups

Solutions of linear equations x-y=1 lies on all quadrants except.....quadrant.

Watch Video Solution

102. Fill ups

The point where the graph of the lines meets x-axis is called.....

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103. $x+2=0$ is the equations of a line:

A. parallel to x-axis and passing through (-2,0)

B. parallel to y-axis and passing through (-2,0)

C. parallel to y-axis and passing through (0,-2)

D. none of these

Answer:

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104. y-3=0 is the equations of a line

A. parallel to x-axis and passing through (3,0)

B. parallel to x-axis and passing through (0,3)

C. parallel to y-axis and passing through (0,4)

D. none of these

Answer:

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105. The point of the form (a, a) always lies on :

A. x-axis

B. y-axis

C. the line y=x

D. the line y=-x

Answer:

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106. The linear equations 5x-3y=15 has

A. a unique solution

B. two solutions

C. infinitely many solutions

D. no solutions.

Answer:

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107. The graph of the linear equations $3x+4y=12$ cuts the x-axis at the point

A. (4,0)

B. (0,4)

C. (0,3)

D. (3,0)

Answer:

Watch Video Solution

108. The graph of the line x=3 passes through the point:

A. (0,3)

B. (0,4)

C. (0.,3)

D. None of these

Answer:

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109. The graph of the line y=-3 does not pass through the point:

A. (2,-3)

B. (3,-3)

C. (0,-3)

D. (-3,2)

Answer:

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110. If the (4,19) is a solution of the equations y=ax+3 then a=

A. 4

B. 3

C. 6

D. 5

Answer:

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111. If (k,4) lies on the graph of 3x+y=10, then the value of k is

A. 2

B. 1

C. 3

D. 4

Answer:

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112. The graph of the linear equation $2x-y=4$ cuts the x-axis at

A. (2,0)

B. (-2,0)

C. (0,-4)

D. (0,4)

Answer:

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113. How many linear equations are satisfied by x=3 and y=-2?

A. only one

B. two solutions

C. three

D. infinitely many

Answer:

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114. Point $(4, 1)$ lies on the line :

A. x+2y=6

B. x+2y=-6

C. $x+2y=-5$

D. $x+2y=16$

Answer:

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115. The solution of $x+3=2x+1$ is

A. 1

B. 2

C. 3

D. 4

Answer:

Watch Video Solution

116. If (2,0) is a solutio of 2x+3y=k then k is

A. 2

B. 4

C. 5

D. 6

Answer:

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117. In graphical representation of y=-3 line is

A. parallel to x-axis

B. parallel to y-axis

C. passes through the origin

D. none of these

Answer:

Watch Video Solution

118. The graph of the linear equation $3x+2y=6$ line which meets the axis at the point:

A. (0,3)

B. (2,0)

C. (2,0)

D. (3,0)

Answer:

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119. The linear equation $2x - 5y = 7$ has

A. a unique solution

B. two solutions

C. infinitely many solutions

D. no solutions.

Answer:

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120. The equation $2x + 5y = 7$ has a unique solution, if x, y are :

A. natural numbers

B. positive real numbers

C. real numbers

D. rational numbes

Answer:

Watch Video Solution

121. If (2,0) in a solutiosn at the linear equations 2x+3y=k that value of k is

A. 4

B. 6

C. 5

D. 2

Answer:

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122. Any solution of the linear equation $2x + 0y + 9 = 0$ in two variables is of the form

A. $\left(-\frac{9}{2}, m\right)$

B. $\left(n, -\frac{9}{2}\right)$

C. $\left(0, -\frac{9}{2}\right)$

D. (-9,0)

Answer:

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123. The graph of the linear equaitons $2x+3y=0$ the y-axis at the point

A. (2,0)

B. (0,3)

C. (3,0)

D. (0,2)

Answer:

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124. The equation x = 7, in two variables, can be written as

A. 1.x+1.y=7

B. 1.x+0.y=7

C. 0.x+1.y=7

D. 0.x+0.y=7

Answer:

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125. Any point on the x-axis of the form

A. (x,y)

B. (0,y)

C. (x,0)

D. (x,x)

Answer:

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126. Any point on the liney=x is of the form

A. (a,a)

B. (0,a)

C. (a,0)

D. (a,-a)

Answer:

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127. The equaion of y=6 is a line

A. parallel to x-axis at a distance 6 units form the origin

B. parallel to y-axis at a distance 6 units form the origin

C. making an intercept of the x-axis

D. making an intercept 6 both the axes.

Answer:

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128. $x = 5, y = 2$ is a solutioin of the linear equatioin

A. x+2y=7

B. 5x+2y=7

C. x+y=7

D. 5x+y=7

Answer:

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129. If a linear equation has solutions $(-2, 2), (0, 0)$ and $(2, -2)$, then it is of the form

A. y-x=0

B. x+y=0

C. $-2x + y = 0$

D. $-x + 2y = 0$

Answer:

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130. The positive solutions of the equation is $ax + by + c = 0$ always lie in the

A. 1st quadrant

B. 2nd quadrant

C. 3rd quadrant

D. 4th quadrant

Answer:

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131. The graph of the linear equation $2x + 3y = 6$ is a line which meets the x-axis at the point

A. (0,2)

B. (2,0)

C. (3,0)

D. (0,3)

Answer:

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132. The point of form $(a, -a)$ always lies on the line

A. x=a

B. y=-a

C. y=x

D. x+y=0

Answer:

 Watch Video Solution

133. The graph of the linear equation y = x passes through the point

A. $\left(\frac{3}{2}, -\frac{3}{2}\right)$

B. $\left(0, \frac{3}{2}\right)$

C. (1,1)

D. $\left(-\frac{1}{2}, \frac{1}{2}\right)$

Answer:

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134. If we multiply or divide both sides of a linear equation with a non-zero number, then the solution of the linear equation :

A. changes

B. remains the same

C. changes in case of multiplications only

D. changes in case of division only

Answer:

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135. How many linear equationsin x and y can be satisfied by x = 1 and y = 2 ?

A. only one

B. two

C. three

D. infinitely many

Answer:

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136. The point of the form (a, a) always lies on :

A. x-axis

B. y=axis

C. on the line y=x

D. on the line x+y=0

Answer:

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137. Draw the graph of x=5y.

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138. Draw the graph of y=5x.

Watch Video Solution

139. Determine the point on the graph of the linear equations 2x+5y=19, where ordinate is $1\frac{1}{2}$ times the abscissa.

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140. For what natural number c, the linear equatins of 2x+cy=8 has equal values of x and y for its solutions.

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141. Write four solutions for the following equation : $2x + y = 7$.

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142. Find the value of k so that x=-1, y=1 and a solution of 9kx+12ky=63

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143. show the system of equatoins graphically

4x+3y=6, 2x-5y=16.

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144. Solve:

$$\frac{3x+2}{7}+\frac{4(x+1)}{5}=\frac{2}{3}(2x+1)$$

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145. Draw the graph of 3x+2y=5 and x+y=2 on the same pair of axes. Do these lines intersect?

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146. Give the equations of two lines passing through (2, 14). How many more such lines are there, and why?

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147. In countries like USA and Canada, temperature is measured in Fahrenheit, whereas in countries like India, it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius:

$F = \left(\frac{9}{5}\right)C + 32$ Draw the graph of the linear equation above using Celsius for x-axis and Fahrenheit for y-axis.

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148. In countries like the USA and Canada, temperature is measured in Fahrenheti whereas in countries like India it is measured in Celsius. Here is alinear equation that converts Fahrenheit to Celsius:

$F = \left(\frac{9}{5}\right)C + 32$

If the tempearature is $30^\circ C$, what is the temperature in Fahrenheit?

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149. In countries like USA and Canada, temperature is measured in Fahrenheit, whereas in countries like India, it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius: $F = \left(\frac{9}{5}\right)C + 32$ If the temperature is $95^\circ F$, what is the temperature in Celsius?

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150. In countries like USA and Canada, temperature is measured in Fahrenheit, whereas in countries like India, it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius: $F = \left(\frac{9}{5}\right)C + 32$ If the temperature is $0^\circ C$, what is the temperature in Fahrenheit and if the temperature is $0^\circ F$, what is the temperature in Celsius?

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151. In countries like USA and Canada, temperature is measured in Fahrenheit, whereas in countries like India, it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius: $F = \left(\frac{9}{5}\right)C + 32$ Is there a temperature which is numerically the same in both Fahrenheit and Celsius? If yes, find it.

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