

MATHS4U

Assignment

+9 Class

It's all about believing

Topic:- Linear equation in two variable

One mark Questions

1. 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) $-x + 2y = 0$ (d) $-2x + y = 0$
2. The graph of the linear equation $y = x$ passes through the point (a) $\left(0, \frac{3}{2}\right)$ (b) $\left(\frac{3}{2}, -\frac{3}{2}\right)$ (c) $\left(-\frac{1}{2}, \frac{1}{2}\right)$ (d) $(1, 1)$
3. The point (m, m) always lies on the line (a) $y = x$ (b) x-axis (c) y-axis (d) $x + y = 0$
4. The graph of the equation $3x + 4y = 12$ is a line which meets the x-axis at the point (a) $(0,3)$ (b) $(3, 0)$ (c) $(4,0)$ (d) $(2,3)$
5. The point $(p, -p)$ always lies on the line (a) $x = p$ (b) $y = -p$ (c) $x = y$ (d) $x + y = 0$
6. If $x = -2$ and $y = 3$ is a solution of the equation $3x - 5y = a$, then value of a is (a) 19 (b) -21 (c) -9 (d) -18
7. If the graph of two linear equation intersect, then the equations has (a) no solution (b) infinite solutions (c) two solutions (d) a unique solution
8. The graph of $x + 3y - 4 = 0$, $2x + 6y + 1 = 0$ (a) intersect each other (b) coincide with each other (c) are parallel to one another (d) are perpendicular to each other
9. The cost of a pen is four times the cost of a pencil. Express the statement as a linear equation in two variables.
10. The cost of 2 pencils is same as the cost of 5 erasers. Express the statement as a linear equation in two variables.

Two Mark Questions

11. $2x + 5y - 13 = 0$
12. Verify and write which of the following are solutions of the equation $x + 3y = 7$ and which are not: $(2, 5)$, $\left(0, \frac{7}{3}\right)$, $(4, 3)$, $(1, 2)$, $(4, 1)$, $(7, 0)$, $(2, 1)$ and $(3, 1)$.
13. Verify which of the following are solutions of the equation $x - 2y = 4$ and which are not: (-2) , $(2, 0)$, $(4,0)$, $(6,1)$, $(\sqrt{2}, 4\sqrt{2})$, $\left(3, -\frac{1}{2}\right)$.
14. Verify If $(3, 1)$ is a solution of the equation $3x + 2y = k$, find the value of k .
15. Find the value of a if $(-1, 1)$ is a solution of the equation $5x - ay = 7$.

Three mark Questions

Draw the graph of each of the following equations

16. $X + 3y - 8 = 0$
17. $4x + 5y - 3 = 0$
18. Draw the graph of the equation $3x - 4y - 13 = 0$ and check whether the point $(3, -1)$ belongs to the line.
19. Draw the graph of the equation $5x + 6y - 28 = 0$ and check whether the point $(2, 3)$ lies on the line.
20. Draw the graph of the equation $2x + 3y = 5$ and check whether the points $(-3, 4)$ and $(7, -3)$ are solutions of the given equation.
21. Draw the graphs of each of the following equations: $x + 2y - 3 = 0$, $2x + 4y - 9 = 0$ What do you observe from your graph?
22. Draw the graphs of each of the following equations: $3x - 2y + 5 = 0$, $2x + 3y - 7 = 0$ What do you observe from your graph?
23. By means of graph, verify that $x = 1, y = -1$ is a solution of the equations $3x + 2y - 1 = 0$, $4x - 3y - 7 = 0$.

Answer

- 1.B 2.D 3.A 4.C 5.D 6.B 7.D 8.C 9. $Y=4x$ where x is the cost of a pencil and y is the cost of a pen. 10. $2x = 5y$ where x is the cost of a pencil and y is the cost of an eraser. 11. $\left(\frac{13}{2}, 0\right), \left(0, \frac{13}{5}\right), (4, 1), (-1, 3)$ 12. $\left(0, \frac{7}{3}\right), (1, 2), (4, 1), (7, 0)$ 13.

$(0, -2), (4, 0), (6, 1), \left(3, -\frac{1}{2}\right)$ 14. $K = 11$ 15. $A = -12$ 18. Yes 19. Yes 20. $(7, -3)$ is a solution 21. The lines are parallel

22. The lines are perpendicular