STD 9 Maths | Total Marks : 30

Linear Equations in Two Variables DPP-2

➤ **Choose the right answer from the given options. [1 Marks Each]** **[10]**

1. The graph of the linear equation y = 3x passes through the point.
   (A) $(0, -\frac{2}{3})$ (B) $(\frac{2}{3}, 2)$ (C) $(, -\frac{2}{3}, 0)$ (D) $(0, \frac{2}{3})$
2. Any solution of the linear equation 2x + 0y + 9 = 0 in two variables is of the form:
   (A) $\left(0, -\frac{9}{2}\right)$ (B) $(-9, 0)$ (C) $\left(\mathrm{n}, -\frac{9}{2}\right)$ (D) $\left(-\frac{9}{2}, \mathrm{m}\right)$
3. Find the value of k, if x = 1, y = 2 is a solution of the equation 2x + 3y = k.
   (A) 5 (B) 6 (C) 7 (D) 8
4. If the point (3, 4) lies on the graph of 3y = ax + 6, then the value of 'a' is:
   (A) 2 (B) 0 (C) 3 (D) 1
5. Write the correct answer in the following: The graph of the linear equation 2x + 3y = 6 cuts the Y-axis at the point,
   (A) (2, 0) (B) (0, 3) (C) (3, 0) (D) (0, 2)
6. 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
7. If a linear equation has solutions (1, 2), (-1, -16) and (0, -7), then it is of the form:
   (A) y = 9x - 7 (B) 9x - y + 7 = 0 (C) x - 9y = 7 (D) x = 9y - 7
8. Which of the following is a linear equation in two variables?
   (A) x + 5 = 8 (B) 2x - 5y = 0 (C) x^2= 5x + 3 (D) 5x = y^2+ 3
9. If (2, 0) is a solution of the linear equation 2x + 3y = k, then the value of k is:
   (A) 2 (B) 4 (C) 5 (D) 6
10. Express y in terms of x in the equation 5x - 2y = 7.
    (A) $\mathrm{y} = \frac{5\mathrm{x}+7}{2}$ (B) $\mathrm{y} = \frac{7\mathrm{x}+5}{2}$ (C) $\mathrm{y} = \frac{5\mathrm{x}-7}{2}$ (D) $\mathrm{y} = \frac{7-5\mathrm{x}}{2}$

➤ **Answer the following short questions. [2 Marks Each]** **[8]**

11. In which quadrant or on which axis each of the following points lie?
    (-3, 5), (4, -1), (2, 0), (2, 2), (-3, -6)
12. Points A(5, 3), B(-2, 3) and D(5, -4) are three vertices of a square ABCD. Plot these points on a graph paper and hence find the coordinates of the vertex C.
13. Draw the graph of the equation $\frac{\mathrm{x}}{3} + \frac{\mathrm{y}}{4} = 1$. Also, find the area of the triangle formed by the line and the coordinates axes.
14. Draw the graph of the equation 2x + y = 6. Shade the region bounded by the graph and the coordinate axes. Also, find the area of the shaded region.

➤ **Answer the following questions. [3 Marks Each]** **[12]**

15. Ravish tells his doughter Aarushi, "Seven years ago, I was seven times as old as you were then. Also, three years from now, I shall be three times as old as you will be".. If present ages of Aarushi and Ravish are x and y years respectively, represent this situation algebraically as well as graphically.
16. Aarushi was driving a car with uniform speed of 60km/ h. Draw distance-time graph. From the graph, find the distance travelled by Aarushi in:
    i. $2\frac{1}{2}$ Hours
    ii. $\frac{1}{2}$ Hour
17. Draw the graphs of the linear equations 4x - 3y + 4 = 0 and 4x + 3y - 20 = 0. Find the area bounded by these lines and x-axis.
18. Draw the graph of the equation 2x + 3y = 12. From the graph, find the coordinates of the point:
    i. Whose y-coordinates is 3.
    ii. whose x-coordinates is -3.

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