STD 9 Maths | Total Marks : 30

Linear Equations in Two Variables DPP-3

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

1. The positive solutums of the equation $ax + by + c = 0$ always lie in the
   (A) l^2 quadrant (B) 2^{nt} quadrant (C) 3^{te} quadrant (D) 4^{te} quadrant
2. The point on the graph of the equation $3x - 2y - 12 = 0$ whose y-coordinate is $3/4$ times the x-coordinate, is
   (A) $(8, 6)$ (B) $(8, -6)$ (C) $(-8, -6)$ (D) $(-6, -8)$
3. The point on the graph of the linear equation $2x + 5y = 19$, whose ordinate is $1\frac{1}{2}$ times its abscissa, is
   (A) $(2, 3)$ (B) $(3, 2)$ (C) $(-2, -3)$ (D) $(-3, -2)$
4. The Autorikshaw fare in a city is charged @ ₹ 10 for the first kilometer and @ ₹4 per kilometer for subsequent distance covered. The linear equation to express the statement is
   (A) y = 4x + 10 (B) y = 4x + 6 (C) y + 4x = 10 (D) y + 4x = 6
5. The work done by a body on application of a constant force is the product of the constant force and the distance travelled by the body in the direction of the force. If the constant force is 3 units, y is the work done and x is the distance travelled, then the linear equation in two variables to express the above statement is
   (A) x = 3y (B) y = 3x (C) y = x + 3 (D) x = y + 3
6. If x = k + 1 y = 2k - 1 is a solution of the equation 3x - 2y + 7 = 0 then k =
   (A) 10 (B) 6 (C) 4 (D) 12
7. The graph of the linear equation 4x - 3y - 12 = 0 cuts x-axis at point
   (A) (3,0) (B) (-3,0) (C) (4,0) (D) (-4, 0)
8. Any solution of linear equation 0x - 2y + 11 = 0 in two variables is of the form
   (A) $(m, 11/2)$ (B) $(m, -11/2)$ (C) $(m, 11)$ (D) $(m, -11)$
9. If $x = 1$ and $y = 6$ is a solution of the equation $8x - ay + a^2 = 0$, then $a =$
   (A) $-2 - 4$ (B) 2,4 (C) $-2, 4$ (D) $2, -4$
10. If $x = 1$ and $y = 1$ is a solution of both the equations $2x - 3ay + a^2 = 0$ and $4x - 5ay + a^2 = 0$, then $a =$
    (A) 1 (B) 4 (C) 2 (D) -1

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

11. Give the geometric representations of the following equations:
    a. On the number line.
    b. On the Cartesain plane.

    3x - 5 = 0
12. If the point (a, 2) lies on the graph of the linear equatio 2x - 3y + 8 = 0, find the value of a.
13. If x = 2a + 1 and y = a -1 is a solution of the equation 2x - 3y + 5 = 0, find the value of a.
14. Give the geometric representations of the following equations:
    a. On the number line.

b. On the Cartesain plane.

$y + 3 = 0$

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

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

x	6	-6
y	-2	6

Draw the graph, using the values of x, y as given in the above table. At what points the graph of the linear equation

i. Cuts the X-axis?

ii. Cuts the Y- axis?

16. Draw the graphs of linear equations $y = x$ and $y = -x$ on the same Cartesian plane. What do you observe?

17. The force exerted to pull a cart is directly proportional to the acceleration produced in 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 6 kg. Read from the graph, the force required when the acceleration produced is:

i. $5ms^{-2}$

ii. $6ms^{-2}$

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

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