INDIAN SCHOOL NIZWA - WORKSHEET

MATHEMATICS

4. Linear equation in two variables

Name: _____ Date:_____ Class: IX Sec: ___

1. Write each of the following equations in the form of ax+by+c=0 and indicate the values of a,b, and c in each case:
   a) $3x + 2y = 2.5$
   b) $7x - 5 = 2y$
   c) $x = 2y$
   d) $\frac{x}{2} - \frac{y}{3} = 5$
   e) $2y - 3 = \sqrt{2}x$
2. Write each of the following as an equation in two variables x and y and write in standard form.
   a) $x = -3$
   b) $y = 4$
   c) $3x = 2$
   d) $7y = 3$
3. Check which of the following are solutions of the equation $x - 2y = 4$ and which are not:
   a) (0,-2) b) (2,0) c) (4,0) d) $(\sqrt{2}, 4\sqrt{2})$ d) (1,1)
4. Let ax+by+c=0, where a,b, and c are real numbers such that $a \neq 0$ and $b \neq 0$. Then any pair of values of x and y which satisfies the equation ax+by+c=0 is called _____ of it.
5. Show that $x = 1, y = 1$ as well as $x = 2, y = 5$ is a solution of $4x - y - 3 = 0$.
6. If $x = 2k - 1$ and $y = k$ is a solution of the equation 3x-5y-7=0 , find the value of k.
7. If $x = k^2$ and $y = k$ is a solution of the equation $x - 5y + 6 = 0$, find the values of k.
8. Write two solutions of the equations:
   a) $3x + 4y = 7$
   b) $x = 6y$
   c) $\frac{2}{3}x - y = 4$
9. Write two solutions of the form $x = 0$, $y = a$ and $x = b$, $y = 0$ for the equations:
   a) $5x - 2y = 10$
   b) $-4x + 3y = 12$
10. If $x = 2p + 1$ and $y = p - 1$ is a solution of the equation $2x - 3y + 5 = 0$, find the value of p.
11. Equation of x axis is _____.

12. Equation of Y-axis is _____.
13. Linear equation in two variables have _____solutions.
14. Every point on the graph of a linear equation in two variables is a _____of the linear equation.
15. Every solution of the linear equation is a _____on the graph of the linear equation.
16. The graph of a linear equation in two variables is a _____.
17. Draw the graph of each of the following linear equations in two variables:
    (i) x + y = 4
    (ii) x - y = 2
    (iii) y = 3x
    (iv) 3 = 2x + y
18. **Case Study:**

    On his birthday, Manoj planned that this time he celebrates his birthday in a small orphanage centre. He bought apples to give to children and adults working there. Manoj donated 2 apples to each children and 3 apples to each adult working there along with Birthday cake. He distributed 60 total apples.



    (a) Taking the number of children as 'x' and the number of adults as 'y'. Represent the above situation in linear equation in two variables.

    (b) If the number of children is 15, then find the number of adults.

    (c) If the number of adults is 12, then find the number of children.

    (d) If x = –5 and y = 2 is a solution of the equation 3x + 5y = b, then find the value of 'b".

Basics:

1. Add: 3.456 and 7.1
2. 3/7+9/2-8.
3. 22/7+8/11.
4. 32/9 x 81/4.
5. 44/9 ÷ 36/4.
6. Reduce 35/84 to the simplest form.
7. Convert the fraction 81/63 to the reduced form.