## ACADEMIC YEAR 2022-23

Worksheet No. 1
Subject:MATHEMATICS

## Grade: IX CH-4- LINEAR EQUATIONS IN TWO VARIABLES

1. Any point on the $\mathrm{y}=\mathrm{x}$ is of the form
(a) $(a, a)$
(b) $(0, a)$
(c) $(a, 0)$
(d) $(a,-a)$
2. The equation of $x$-axis is of the form
(a) $\mathrm{x}=0$
(b) $\mathrm{y}=0$
(c) $x+y=0$
(d) $x=y$
3. Graph of $y=6$ is a line:
(a) parallel to x -axis at a distance 6 units from the origin
(b) parallel to $y$-axis at a distance 6 units from the origin
(c) making an intercept 6 on the $x$-axis.
(d) making an intercept 6 on both the axes.
4. $x=5, y=2$ is a solution of the linear equation
(a) $x+2 y=7$
(b) $5 x+2 y=7$
(c) $x+y=7$
(d) $5 x+y=7$
5. If a linear equation has solutions $(-2,2),(0,0)$ and $(2,-2)$, then its is of the form
(a) $\mathrm{y}-\mathrm{x}=0$
(b) $x+y=0$
(c) $-2 x+y=0$
(d) $-x+2 y=0$
6. The graph of the linear equation in two variables $y=m x$ is
(i) a line parallel to $x$ - axis
(b) a line parallel to $y$ - axis
(c) a line passing through the origin
(d) not a straight line
7. If the point $(3,4)$ lies on the graph of $3 y=a x+7$, then find the value of $a$.
8. How many solution(s) of the equation $2 x+1=x-3$ are there on the :
(i) Number line (ii) Cartesian plane
9. Let $y$ varies directly as $x$. If $y=12$ when $x=4$, then write a linear equation. What is the value of $y$ when $x=5$ ?
10. The following values of $x$ and $y$ are thought to satisfy a linear equation:

| $\mathbf{x}$ | 1 | 2 |
| :--- | :--- | :--- |
| $\mathbf{y}$ | 1 | 3 |

Draw the graph, using the values of $x, y$ as given in the above table. At what point the graph of the linear equation (i) cuts the $x$-axis. (ii) cuts the $y$-axis.
11. Solve the equation $2 x+1=x-3$, and represent the solution(s) on
(ii)the number line,
(iii)the Cartesian plane.

