

## Homework :-

- ① Find the value of  $k$ , if  $x=2$ ,  $y=1$  is a solution of the equation  $2x+3y=k$

$$\Rightarrow 2x + 3y = k$$
$$x = 2 \quad , \quad y = 1 \quad (\text{given})$$

$$= 2 \times 2 + 3 \times 1 = 4 + 3 = 7 = k$$

$$\boxed{k = 7}$$

- ② Find the points where the graph of the eq.  $3x+4y=12$  cuts  $x$ - and  $y$ -axis?

$$\Rightarrow \text{Cut } x\text{-axis :- } (y=0)$$

$$= 3x + 4y = 12$$

$$x = 4 \quad , \quad y = 0 \quad (4, 0)$$

$$\text{Cut at } y\text{-axis :- } (x=0)$$

$$= 3x + 4y = 12$$

$$x = 0 \quad , \quad y = 3 \quad (0, 3)$$

- ③ At what point does the graph of the linear eq.  $x+y=5$  meet a line which is parallel to the  $y$ -axis, at a distance 2 units from the origin & in the true direction of  $x$ -axis

Ans:-  $x+y=5$

parallel to  $y$ -axis =  $x$  is constant.

$$= x = 2 \quad (\text{given})$$

$$x + y = 5$$

$$2 + y = 5$$

$$y = 3$$

$$\left. \begin{array}{l} x + y = 5 \\ 2 + y = 5 \\ y = 3 \end{array} \right\} \begin{array}{l} x = 2 \\ y = 3 \end{array}$$

$$\therefore (2, 3)$$

- ④ Determine the point on the graph of the eq.  $2x+5y=20$ ,  $x = \frac{5}{2}y$

$$\Rightarrow 2x + 5y = 20 \quad \text{--- (1)}$$

$$n = \frac{5}{2}y \rightarrow \textcircled{ii}$$

⇒ Substituting the value of  $n$  in eq  $\textcircled{i}$

$$= 2 \times \frac{5y}{2} + 5y = 20$$

$$5y + 5y = 20$$

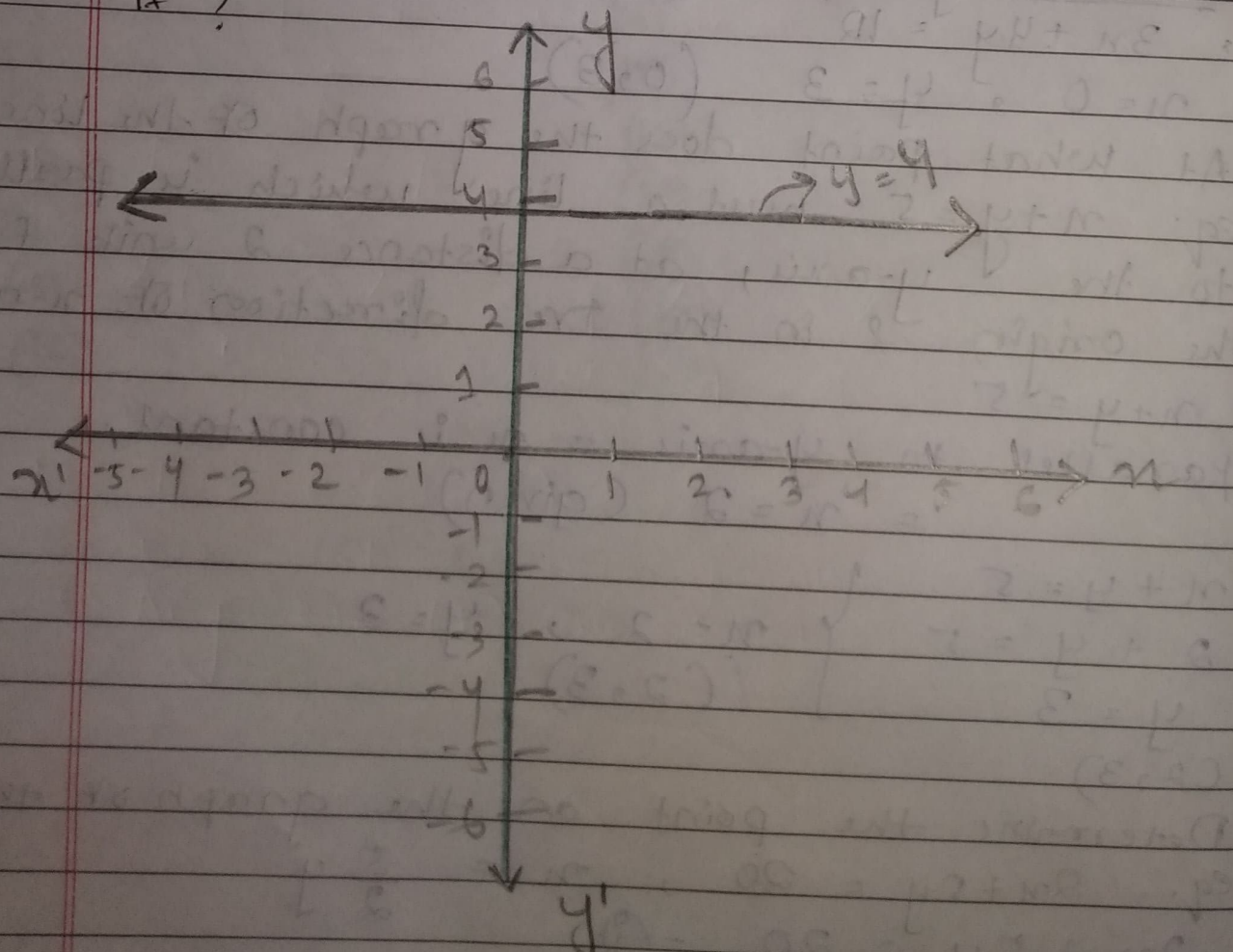
$$10y = 20$$

$$y = 2$$

$$y = 2, \quad n = \frac{5 \times 2}{2}$$

∴  $(5, 2)$

$\textcircled{5}$  Draw the graph of the eq. represented by the straight line which is parallel to the  $n$ -axis and is 4 units above it?



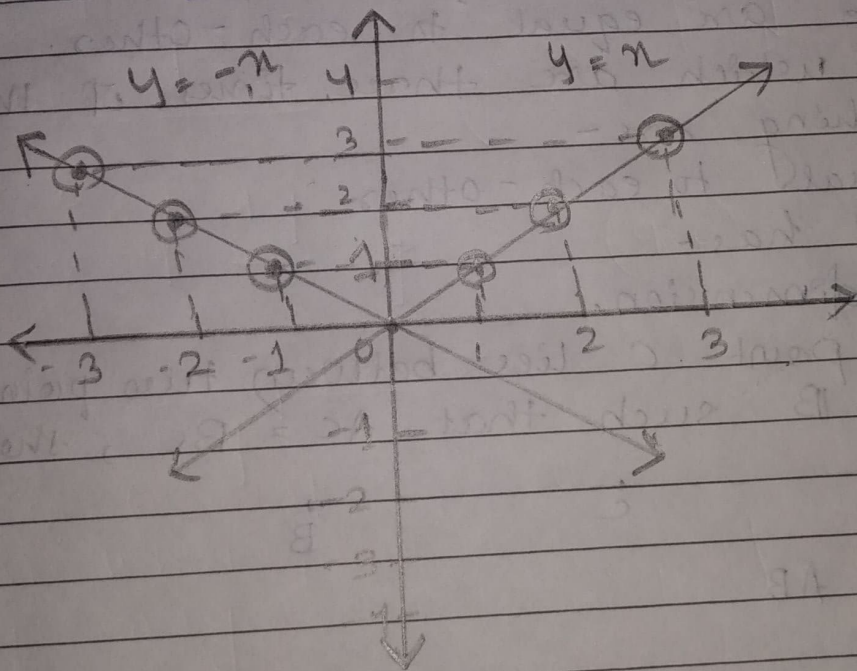
⑥ Draw the graphs of linear eq.  $y = x$  &  $y = -x$  on the same Cartesian plane. What do you observe?

\*  $y = x$

x	1	2	3
y	1	2	3

\*  $y = -x$

x	-1	-2	-3
y	1	2	3



We observed that two equations intersect at coordinate  $(0, 0)$  i.e., origin.