# H.W (Linear Equation in two variable)

1) $x = 2, y = 1$

By substituting the values in $2x + 3y = k$ we get,

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

$k = 4 + 3$

$k = 7.$

2) $3x + 4y = 12$

Let $x = 0$,

$4y = 12$

$y = 3.$

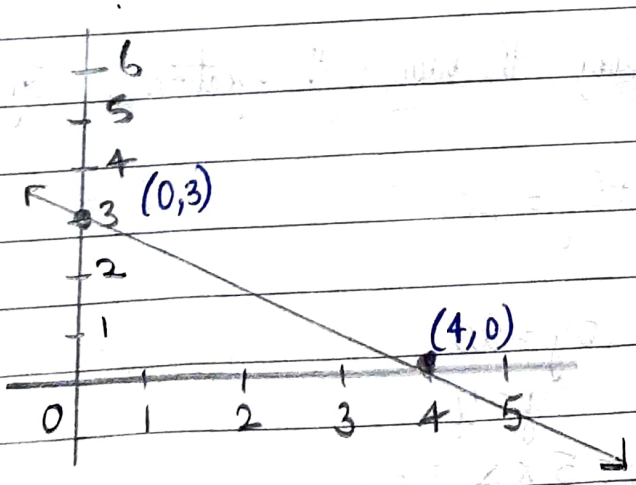
Solution $= (0, 3)$

Let $y = 0$

$3x = 12$

$x = 4$

solution $= (4, 0)$




∴ $(0, 3)$ and $(4, 0)$ are the points where the equation $3x + 4y = 12$ cuts the x-axis and y-axis.

3) $x+y=5$

Let us write this equation intercept form,

$$\frac{x}{5}+\frac{y}{5}=1$$

Thus, x intercept 5 and anth y-intercept is 5.

As the line is at distance of 2 units from the origin and it (+ve) direction of x-axis,

$$x=2.$$

∴ By putting the values we get,

$$2+y=5$$
$$y=3$$

∴ Required point is (2,3)

4) Given,

$$x=\frac{5}{2}y.$$

By the substituting the value in the equation $2x+5y=20$ we get,

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

$$10y=20$$
$$y=2$$
$$x=\frac{5}{2}\times 2=5.$$

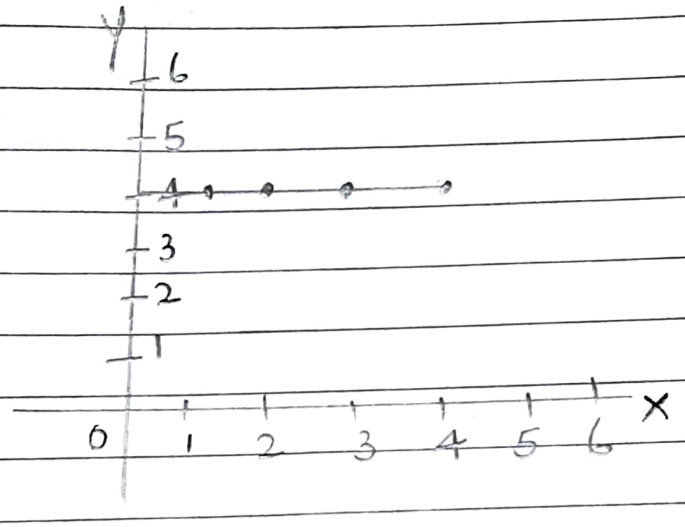
∴ required point is (5,2)

5) Any straight line parallel to x-axis in ~~negat~~ positive direction of y-axis is given by $y = 4$ as per the question,

$y = 4$.

Points are :-

$(1,4), (2,4), (3,4), (4,4)$




6) $y = x$

| x | 0 | 1 | 2 |
|---|---|---|---|
| y | 0 | 1 | 2 |

$y = -x$

| x | 0 | 1 | 2 |
|---|---|---|---|
| y | 0 | -1 | -2 |