Linear Inequations Ex 15.5 Q7

We have,

$$0 \le 2x - 5y + 10 \ldots\ldots\ldots\ldots\ldots\ldots (i)$$

Converting the given inequation into equation, we obtain, $2x - 5y + 10 = 0$.

Putting $x = 0$, we get $y = \frac{-10}{-5} = 2$

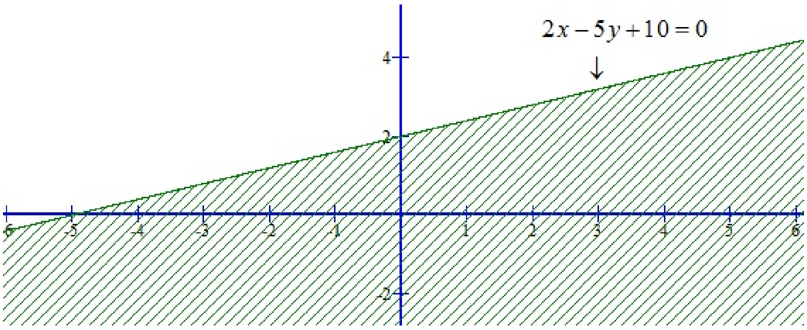
Putting $y = 0$, we get $x = \frac{-10}{2} = -5$

So, this line meets x-axis at $(-5,0)$ and y-axis at $(0,2)$.

we plot these points and join them by a thick line. This line divides the xy-plane in two parts. To determine the region represented by the given inequality consider the point $O(0,0)$.

Putting $x = 0$ and $y = 0$ in the inequation (i), we get $0 \le 10$

Clearly, $(0,0)$ satisfies the inequality. so, the region containing the origin is represented by the given inequation as shown below:



Linear Inequations Ex 15.5 Q8

We have,

$$3y \ge 6 - 2x \ldots\ldots\ldots\ldots\ldots\ldots (i)$$

Converting the given inequation into equation, we obtain, $3y = 6 - 2x$.

Putting $x = 0$, we get $y = \frac{6}{3} = 2$

Putting $y = 0$, we get $x = \frac{6}{2} = 3$

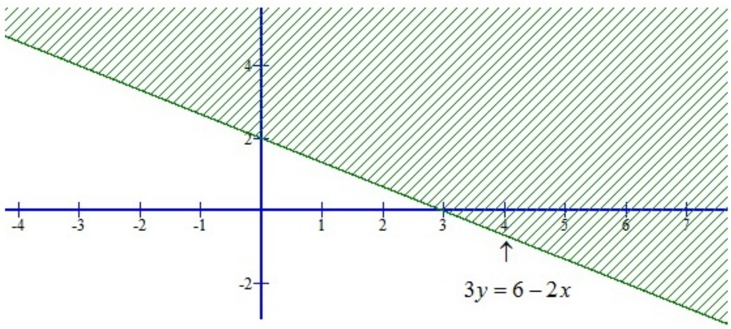
So, this line meets x-axis at $(3,0)$ and y-axis at $(0,2)$.

we plot these points and join them by a thick line. This line divides the xy-plane in two parts. To determine the region represented by the given inequality consider the point $O(0,0)$.

Putting $x = 0$ and $y = 0$ in the inequation (i), we get $0 \ge 6$ it is not possible.

$\therefore$ we find that the point $(0,0)$ does not satisfy the equation $3y \ge 6 - 2x$.

So, the region represented by the given equation is shaded region shown below:



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