Linear Inequations Ex 15.2 Q5

Consider the first inequation,

$$3x - 6 > 0$$
$$3x > 6$$
$$x > 2 \quad \ldots(i)$$

Consider the second inequation,

$$2x - 5 > 0$$
$$2x > 5$$
$$x > \frac{5}{2} \quad \ldots(ii)$$

From (i) and (ii), $\left[\frac{5}{2}, \infty\right]$ is the solution set of the simultaneous equations.

Linear Inequations Ex 15.2 Q6

Consider the first inequation,

$$2x - 3 < 7$$
$$2x < 7 + 3$$
$$2x < 10$$
$$x < 5 \quad \ldots(i)$$

Consider the second inequation,

$$2x > -4$$
$$x > \frac{-4}{2}$$
$$x > -2 \quad \ldots(ii)$$

From (i) and (ii), $[-2, 5]$ is the solution set of the simultaneous equations.

Linear Inequations Ex 15.2 Q7

Consider the first inequation,

$$2x + 5 \leq 0$$
$$2x \leq -5$$
$$x \leq \frac{-5}{2} \quad \ldots(i)$$

Consider the second inequation,

$$x - 3 \leq 0$$
$$x \leq 3 \quad \ldots(ii)$$

From (i) and (ii), $\left(-\infty, \frac{-5}{2}\right]$ is the solution set of the simultaneous equations.

Linear Inequations Ex 15.2 Q8

$$5x - 1 < 24$$
$$5x < 24 + 1$$
$$5x < 25$$
$$x < \frac{25}{5}$$
$$x < 5 \quad \ldots\ldots(1)$$

And

$$5x + 1 > -24$$
$$5x > -24 - 1$$
$$5x > -25$$
$$x > -5 \ldots\ldots(2)$$

From equation (1) and (2),

$$< x < 5$$

$$\Rightarrow \quad (-5, 5)$$

********** END **********