

Linear Inequations Ex 15.1 Q5

$$x + 5 > 4x - 10$$

$$\Rightarrow x - 4x > -10 - 5$$

$$\Rightarrow$$
 $-3x > -15$

$$\Rightarrow$$
 3x < 15

$$\Rightarrow x < \frac{15}{3} = 5$$

$$\Rightarrow x < 5$$

$$(-\infty,5)$$
 is the solution set

Linear Inequations Ex 15.1 Q6

$$3x + 9 \ge -x + 19$$

$$\Rightarrow$$
 $3x + x \ge 19 - 9$

$$\Rightarrow \qquad \qquad x \ge \frac{10}{4} = \frac{5}{2}$$

$$\therefore \left[\frac{5}{2}, \infty\right) \text{is the solution set}$$

Linear Inequations Ex 15.1 Q7

$$2(3-x) \ge \frac{x}{5} + 4$$

$$\Rightarrow 6 - 2x \ge \frac{x}{5} + 4$$

$$\Rightarrow -2x - \frac{x}{5} \ge 4 - 6$$

$$\Rightarrow \frac{-11x}{5} \ge -2$$

$$\Rightarrow \frac{11x}{5} \le 2$$

$$\Rightarrow x \le \frac{10}{11}$$

$$\left(-\infty, \frac{10}{11}\right)$$
 is the solution set

Linear Inequations Ex 15.1 Q8

$$\frac{3x-2}{5} \le \frac{4x-3}{2}$$

$$\Rightarrow \frac{3x}{5} - \frac{2}{5} \le \frac{4x}{2} - \frac{3}{2}$$

$$\Rightarrow \frac{3x}{5} - \frac{4x}{2} \le \frac{-3}{2} + \frac{2}{5}$$

$$\Rightarrow \frac{6x - 20x}{10} \le \frac{-15 + 4}{10}$$

$$\Rightarrow -14x \le -11$$

$$\Rightarrow 14x \ge 11$$

$$\Rightarrow$$
 $-14x \le -11$

$$\Rightarrow$$
 14 \times \geq 11

$$\Rightarrow \qquad \chi \ge \frac{11}{14}$$

$$\left[\frac{11}{14}, \infty\right)$$
 is the solution set

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