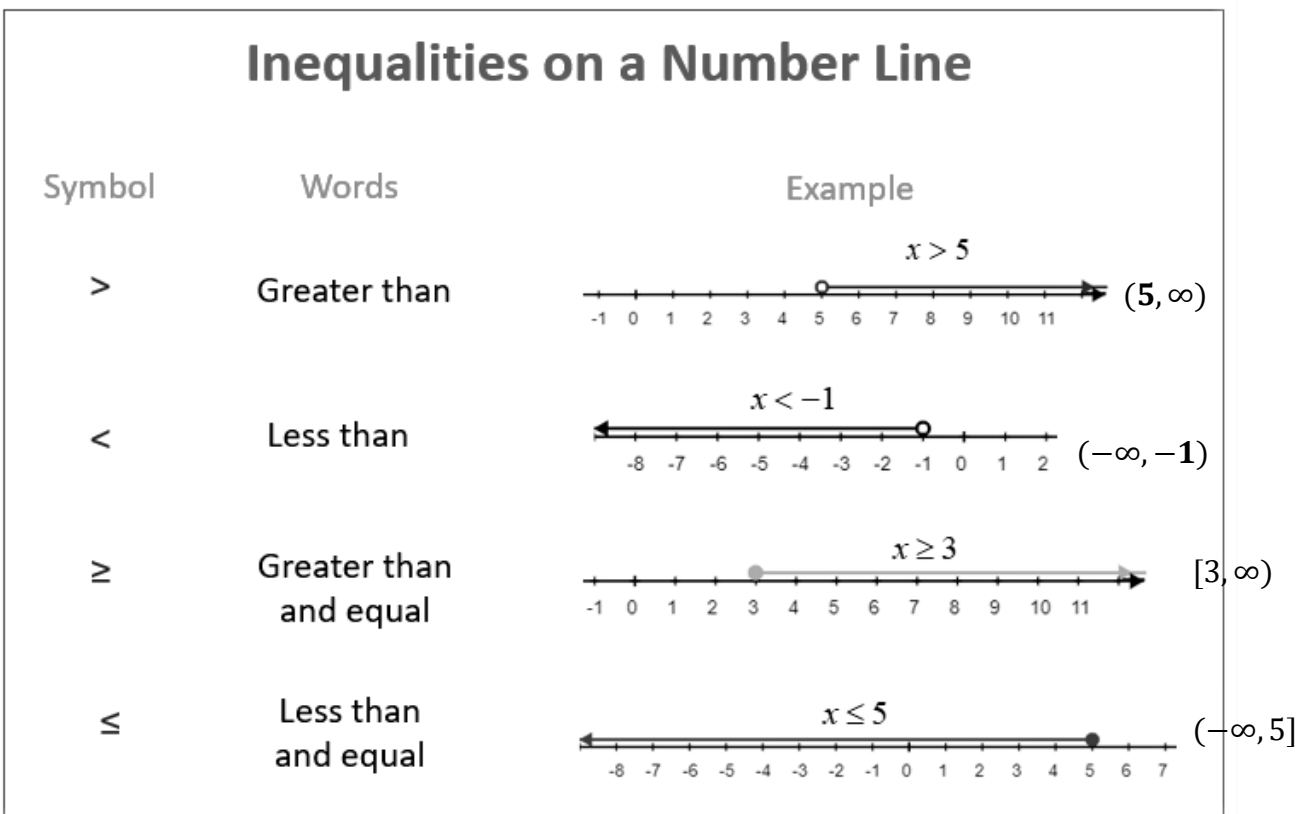
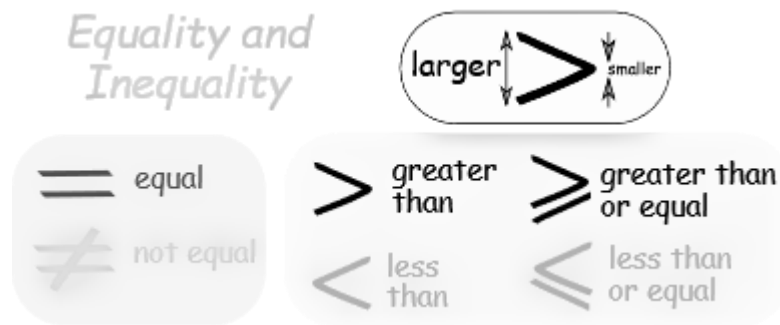


Inequality:



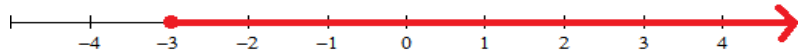
As seen above, if the inequality has equal sign then in the line number when mentioning the solution you must close the circle, else keep it non-shaded circle.

Example: If $2 + x \geq -1$, what is the value of x?

Solution:

By subtracting 2 from both sides:

$$x \geq -3$$



Because the inequality is greater than or equal to -3, the line number starts from -3 with shaded circle until infinity.

Also answer can be written as $[-3, \infty)$.

Note: when divide or multiply by (-) negative, the inequality sign must be flipped.

Example: If $3 - 2x \geq -5$, what is the value of x?

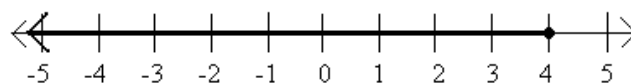
Solution:

Subtract 3 from both sides

$$-2x \geq -8$$

Then divide by -2, the inequality must flip

$$x \leq 4$$



Or $(-\infty, 4]$.

Example: If $x^2 > 9$, what is the value of x?

Solution:

Making x alone by using square root on both sides to eliminate the square power on x .

$$\sqrt{x^2} > \sqrt{9}$$

Then

$$\sqrt{9} = \pm 3$$

That means $\sqrt{9} = 3$ or $\sqrt{9} = -3$

Using the inequality, the possible values of x are:

$$x > 3 \text{ or } x < -3$$

