

Solving and Graphing Inequalities

9th Grade

The same steps as an equation, plus one rule and one new notation.

Solve exactly like an equation, then draw the solution on a number line.

SOLVE AS NORMAL

1

Inverse operations, both sides, same as an equation.

FLIP FOR NEGATIVES

2

Multiplying or dividing by a negative reverses the sign.

CHOOSE THE CIRCLE

3

Open for $<$ and $>$, filled for $\leq$ and $\geq$.

SHADE THE RIGHT WAY

4

Towards the values that make it true. Test one to be sure.

WORKED

$$-3x + 5 \leq 14 \rightarrow -3x \leq 9 \rightarrow x \geq -3$$

Filled circle at -3 , shaded to the right.

Test a number from your shaded region in the original inequality. It should work.