

6.1: Solving Inequalities Using Addition and Subtraction

Goals:

***Graph inequalities on a number line**

- Decide if the circle is open or closed

- Decide which direction the arrow should point

***Solve one-step inequalities using addition and subtraction**

$x \geq 5$ means that x can be:

$x < -1$ means that x can be _____. x CANNOT be _____!

To Graph a Number on a number line:

1.

2.

3.

Graph the following inequalities on a number line:

Ex: Graph $x < 3$.



Ex: Graph $x \geq -1$



Ex: Graph $5 \geq x$



Solving inequalities using addition and subtraction:

1.

2.

Ex: $x - 5 > -3.5$

Solve and graph solution on a number line:

Ex: $x - 9 \leq 3$

Ex: $p - 9.2 < 5$

Ex: $-1 \geq m - \frac{1}{2}$



Ex: $9 \geq x + 7$

Ex: $y + 5.5 > 6$



Ex: You are checking a bag at an airport. Bags can weigh no more than 50 pounds. Your bag weighs 16.8 pounds. Find the possible weights w (in pounds) that you can add to the bag.