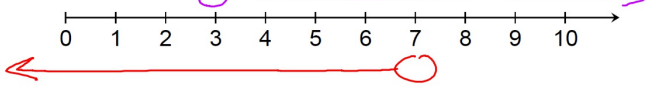
Inequalities connected with the word AND:

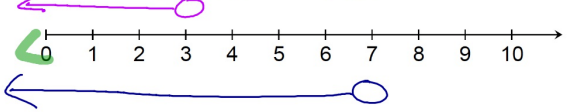
w > 3 AND w < 7



Can be written as one inequality: 3 < w < 7

Inequalities connected with the word AND:

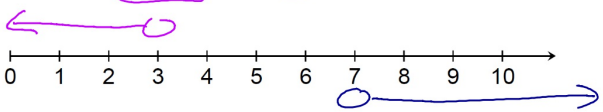
w < 3 AND w < 7



Can be written as one inequality: w < 3

Inequalities connected with the word AND:

w < 3 AND w > 7



Can be written as NO SOLUTION

When you graph two inequalities connected with the word

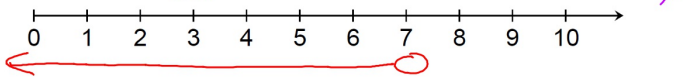
AND

the final solution is:

The interval where they OVERLAP

Inequalities connected with the word OR:

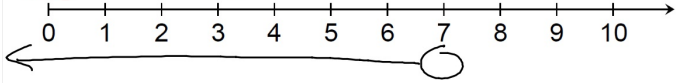
w > 3 OR w < 7



Can be written as ALL REAL NUMBERS

Inequalities connected with the word OR:

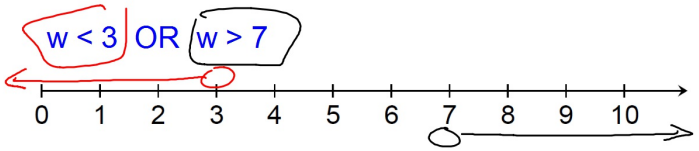
w < 3 OR w < 7



Can be written as one inequality: w < 7

Inequalities connected with the word OR:

w < 3 OR w > 7



Can be written as only w < 3 OR w > 7

When you graph two inequalities connected with the word OR the final solution is:

Anywhere the graph is shaded. (for either or both inequalities)

What would have to be true for a compound inequality using the word **AND** to have NO SOLUTION?

- There are no numbers that make both inequalities true.
- Graphs of inequalities don't overlap anywhere.

What would have to be true for a compound inequality using the word **AND** to have a solution of ALL REAL NUMBERS?

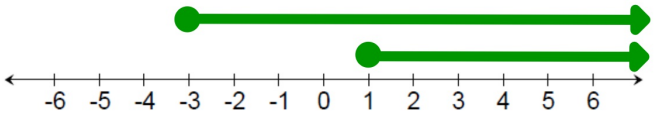
- The solution to BOTH inequalities must be All Real Numbers.
- Both graphs must be the entire number line.

What would have to be true for a compound inequality using the word **OR** to have NO SOLUTION?

- Both inequalities must be NO SOLUTION.

What would have to be true for a compound inequality using the word **OR** to have a solution of ALL REAL NUMBERS?

- The solutions to the two inequalities combined must contain all real numbers.
- Graphs must point in opposite directions and overlap.



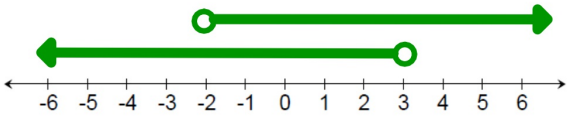
What is the solution to the above compound inequality using the word....

AND

$x \geq 1$

OR

$x \geq -3$



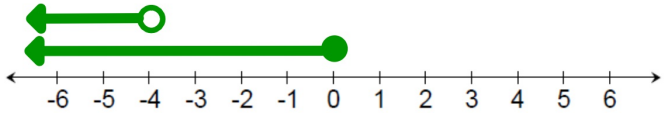
What is the solution to the above compound inequality using the word....

AND

$-2 < x < 3$

OR

All Real #'s



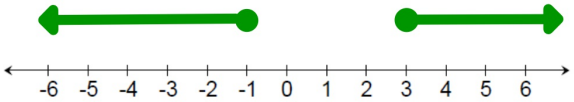
What is the solution to the above compound inequality using the word....

AND

$x < -4$

OR

$x \leq 0$



What is the solution to the above compound inequality using the word....

AND

NO Solution

OR

$w < -1$ or $w > 3$