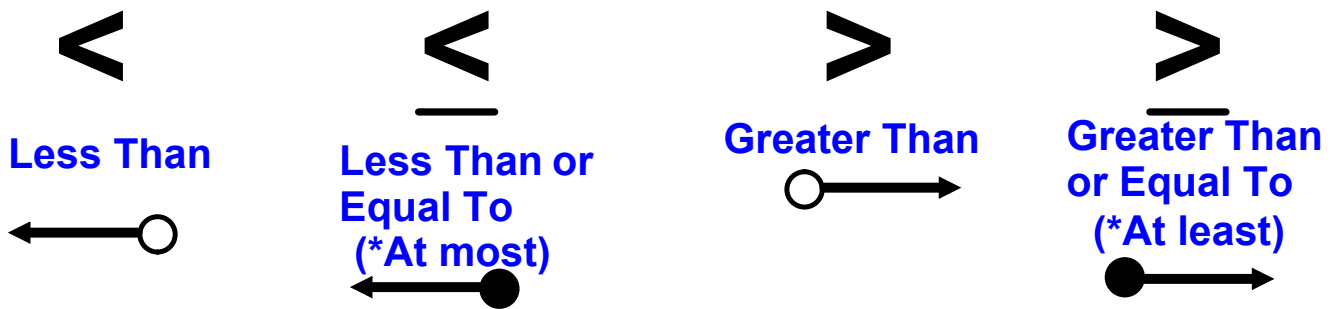


# Inequalities



Inequality are solved in the same way algebraic equations are solved...with 2 exceptions.

1. The answer will be range of possible answers.
2. If you multiply or divide by a negative number (while solving) you need to flip the inequality sign.

## Compare

### Equation

9 more than twice a number is 12 less than 27

$$2n + 9 = 27 - 12$$

$$2n + 9 = 15$$

$$2n = 6$$

$$n = 3$$



### Inequality

9 more than twice a number is less than 27

$$2n + 9 < 27$$

$$2n < 18$$

$$n < 9$$



Exception 1  
Range of answers:

n is less than 9 so...  
8.895, 6, -12, -15.7, etc.

### Exception 2

When you multiply or divide by a negative number you flip the inequality sign.

$$7 - 5p \leq -3$$

$$7 + -5p \leq -3$$

$$-5p \leq -10$$

$$p \geq 2$$

If the opposite of 5p is  $\leq$  THEN 5p will be  $\geq$ .

