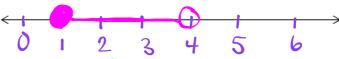


Day 10 Notes -- Compound Inequalities & Interval Notation

**Compound Inequalities:** 

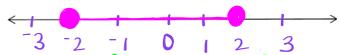
 $1 \le x < 4$ Graph:



- a) State all the integers that are included in the solution set:
- b) State a few numbers that are included in the solution set:
- 2) Graph: -1 < x < 3



- a) State all the integers that are included in the solution set: 20,1
- b) State a few numbers that are included in the solution set: \_
- 3) Graph:  $-2 \le x \le 2$



- a) State all the integers that are included in the solution set:  $\frac{\xi 2}{1}$
- b) State a few numbers that are included in the solution set: \_\_\_\_\_2

Interval Notation: is another way to write a set of numbers when you are using all real numbers in a set.

We use a ( or ) when we do not include a number and we use a [ or ] when we do include a number.

Write the following using Interval Notation:

(lower boundary, upper boundary]



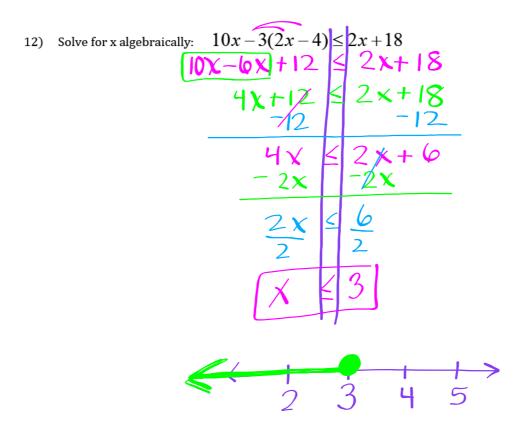
5) 
$$6 < x < 9$$
 (6,9)

6) 
$$-3 \le x \le 4$$
  $[-3, 4]$ 

7) 
$$-2 < x \le 5$$
  $\left(-2, 5\right)$ 

- State the integers that are in: (5,9]
- State the integers that are in: (4,6)

- 10) State the integers that are in:  $\begin{bmatrix} -2,3 \end{bmatrix}$
- 11) State the integers that are in:  $\begin{bmatrix} -1,4 \end{bmatrix}$



If x is a number in the interval [0,6], state all integers that satisfy the given inequality. Explain how you determined these values.

I graphed the inequality, and these values are in the Solution Set.