By the end of this lesson you will be able to _____.

What is the difference between solutions to equations and solutions to inequalities?

Solutions to Equations	Solutions to Inequalities
$$x + 2 = 5$$	The average number of kids in a household in 1900 was at least 3.
How many solutions do equations have?	How many solutions do inequalities have?

Example 1 – Graph the inequality on the number line.

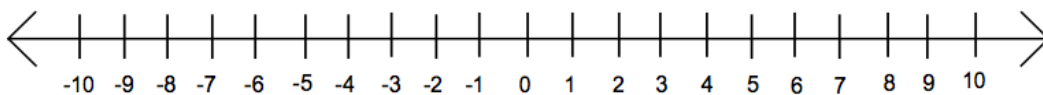$$x > 6$$ translates to "_____"

1) Is 6 a solution for x?

   a. _____   b. _____

2) In which direction are the solutions to the inequality?

   a. _____

   b. _____

Example 2 – Graph the inequality on the number line.

$$x £ 5$$ translates to "_____"
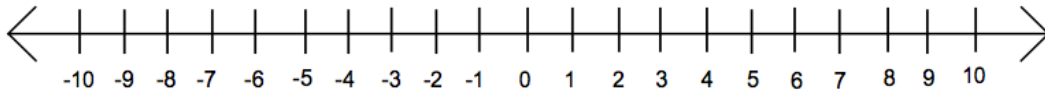
1)   Is 5 a solution for x?

a. _____   b. _____

2)   In which direction are the solutions to the inequality?

a. _____

b. _____

Example 3 – Graph the inequality on the number line.

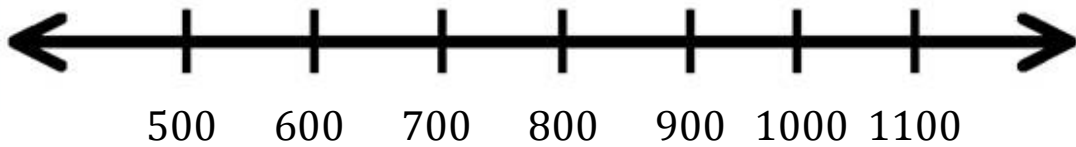The school holds _____ students.

1)   Is _____ a solution for x?

a. _____   b. _____

2)   In which direction are the solutions to the inequality?

a. _____

b. _____

Example 4 – Graph the inequality on the number line.
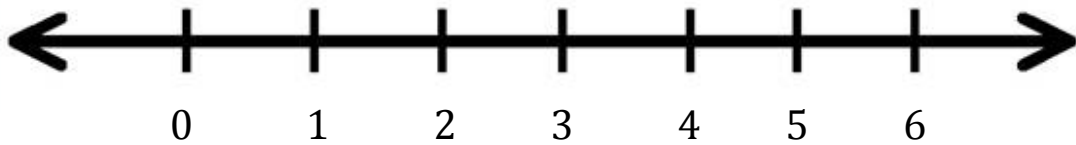
Each group has _____ students.

1) Is _____ a solution for x?

    a. _____   b. _____

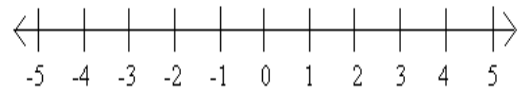2) In which direction are the solutions to the inequality?
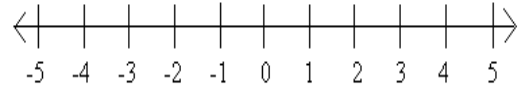
    a. _____

    b. _____

$$\longleftarrow \;|\;|\;|\;|\;|\;|\;|\longrightarrow$$

$$0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6$$

Your Turn to Practice

Write out each inequality in words. Then draw the inequality on the number line.
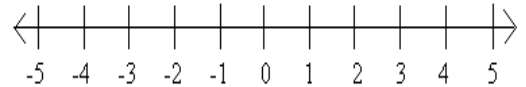
1) $x \geq 1$ _____

-5 -4 -3 -2 -1 0 1 2 3 4 5

2) $x > 3$ _____

-5 -4 -3 -2 -1 0 1 2 3 4 5

3) $x \leq 3$ _____

-5 -4 -3 -2 -1 0 1 2 3 4 5

4) $x < -2$ _____

-5 -4 -3 -2 -1 0 1 2 3 4 5

5) $x \geq -2$ _____

-5 -4 -3 -2 -1 0 1 2 3 4 5

6) $x > 1$ _____

-5 -4 -3 -2 -1 0 1 2 3 4 5