**Inequalities Guided Notes**

**An inequality says that two values are not equal.**

a \_\_\_ b means that a is less than b

a \_\_\_ b means that a is greater than b

a\_\_\_\_ b means that a is less than or equal to b

a \_\_\_\_b means that a is greater than or equal to b

Ex 1: Which answers from the set make the inequality true?

v > 9

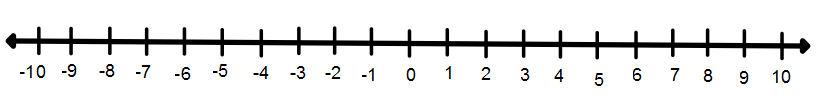
{3, 6, 7, 9, 12}

Ex 2: Which answers from the set make the inequality true?

x ≤ 9

{5, 9, 11}

Inequalities can be represented on a \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_.



a > 3

When shading on a number line remember that as you go to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ a number line gets larger. When you go to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a number line gets smaller.

Less than < -- shade to the \_\_\_\_\_\_\_\_\_\_

Greater than > -- shade to the \_\_\_\_\_\_\_\_\_

If the inequality sign is < or > then you put an \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ on the number line because the number is not part of the solution so it cannot be shaded.

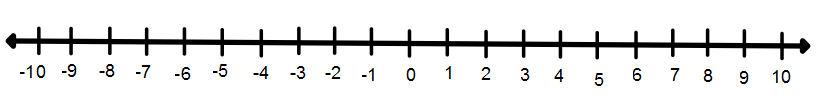
> , < \_\_\_\_\_\_\_\_\_\_\_ circle

If the inequality sign is ≥ or then you put a \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ on the number line because the number is part of the solution so it is shaded.

≤ , ≥ \_\_\_\_\_\_\_\_\_\_\_ circle

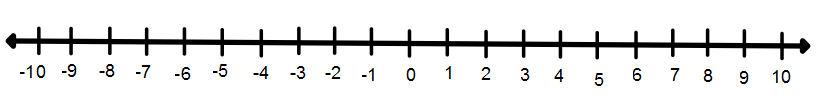
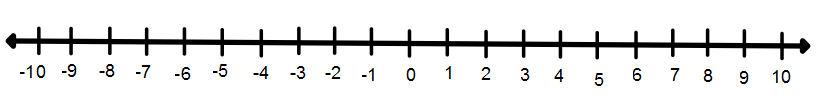
**Ex**. 3: Represent the inequality on a number line.

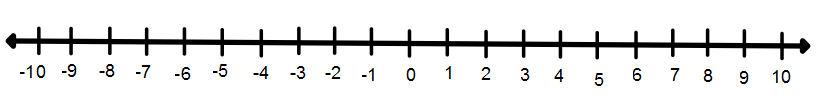
c ≤ 5



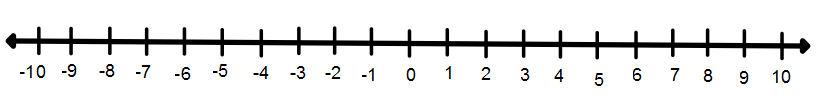
Practice

Represent each inequality on a number line.

1.  z > 0
2.  r ≥ - 5



1. y ≤ 8



1. b < - 4

Ex.4: Heather needs to raise $5000 to go on a mission trip. She has earned $2000 so far. Write an inequality for the amount of money, m, she still needs to raise. Represent the inequality on a number line.

Ex. 5: Adam spent less than $500 on rent last month. Write an inequality to represent this amount. Graph the inequality on a number line.