Problem of the Day: Solve the equation.
5(n - 3) - 2(n - 6) = 6n + 5 - n

Plan for the Day: Collect extra credit logic puzzles
Go over last week's homework
Notes on graphing inequalities
Activity with comparing inequalities
Objective: We will be able to graph inequalities.
Good luck JH Volleyball at Rusk!!
Today is National Teddy Bear Day!!

$n = -4$

12. $-6x - 15 - 3x = 12$
$-9x - 15 = 12$
$x = -3$

14. $-2.5 + 4.75 - 6 - 2.25$
$2.25 - 6 - 2.25$
-6

< means less than
> means greater than
≤ means less than OR equal to
≥ means greater than OR equal to

Inequality- open sentence featuring <, >, ≤, ≥; differs from an equation because it is not equal (does not have an =)

Inequalities do not have one answer, but rather a **solution set** of numbers that make it true.

Examples: x < 6 x > -3

5.99, 5, 4, 3, -3, 0 -2, -1, 100, 0, 1 -2.9999

Graph the solution set

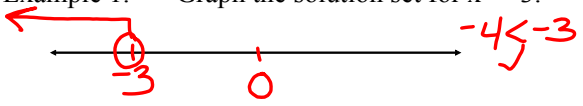
1. if it is < or >, then the number gets an open circle and the line extends in the correct way

2. if it is ≤ or ≥, then the number gets a closed circle and the line extends in the correct way

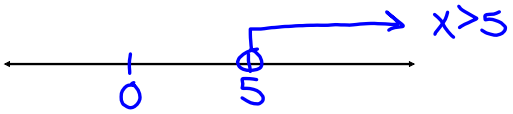
< 0

≤

Example 1: Graph the solution set for x < -3.



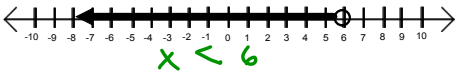
Example 2: Graph the solution set for 5 < x.



Example 3: Write an inequality to represent the solution set shown.

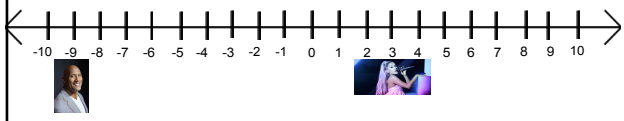
$x \geq -3$

Example 4: Write an inequality to represent the solution set shown.



$x < 6$

Operation	Walker A's Position Chasity/Ariana	Inequality Symbol	Walker's B Position Ivan/The Rock
Starting Number	2	<	4
Add 2	4	<	6
Subtract 3	1	<	3
Add -2	-1	<	1
Subtract -4	3	<	5
Multiply by 2	6	<	10
Subtract 7	-1	<	3
Multiply by -3	3	>	-9
Add 5			
Divide by -4			
Subtract 2			
Multiply by -1			



Operation	Walker A's Position	Inequality Symbol	Walker B's Position
Starting Number			
Add ____			
Subtract ____			
Multiply by ___			
Divide by ____			

Which operations on an inequality reverse the inequality symbol?

What is the difference between solving an equation and an inequality?