**2.1 A.REI.3 Inequality Notes**

When solving a linear inequality, follow the same steps as solving a linear
equation. However, there is one very important exception…

**When you \_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_ an inequality by a

\_\_\_\_\_\_\_\_\_\_\_\_ number, it \_\_\_\_\_\_\_\_ the inequality.**

What does each inequality symbol mean?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Symbol | Words | Arrow | Circle | Grouping Symbols (Interval Notation) |
| $$<$$ |  |  |  |  |
| $$\leq $$ |  |  |  |  |
| $$>$$ |  |  |  |  |
| $$\geq $$ |  |  |  |  |

\*\*\* Positive and Negative \_\_\_\_\_\_\_\_\_\_\_ Have the grouping Symbols of \_\_\_\_\_\_ ALWAYS

**Set Notation** FOR ANY INEQUALITY:

**Solve and write the solution in interval notation, set notation and graph the solutions.**



1. $-7+2\left(1+7r\right)<-33+7r$



2. $-3p+29\leq 8(p+5)$



3. $8n-4\geq -4(1+8n)$

What does a No Solution graph look like?

What does an Infinite Solution graph look like?