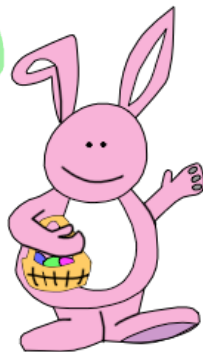


## 8th Grade Lesson 89



- I can describe the trichotomy axiom.
- I can use symbols of negation.



Less  
←

Greater  
→

$$\begin{aligned}
 0 &> -4 \\
 -2 &< 0 \\
 2 &> -2 \\
 -4 &< 2
 \end{aligned}$$

For two numbers, one and only one of these statements is true:

**TRICHOTOMY AXIOM**

The first number is greater than the second number.  $a > b$

The first number is equal to the second number.  $a = b$

The first number is less than the second number.  $a < b$

$< > = \leq \geq$

$$4 < 1$$

$$4 \neq 2 + 6$$

$$7 \neq 10$$

$$4 < 1$$

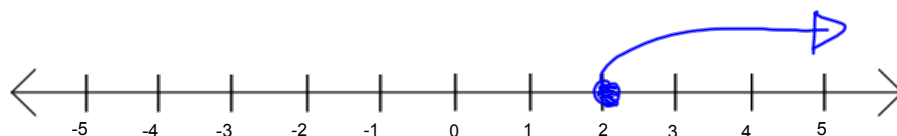
$$4 \neq 2 + 6$$

$$7 \neq 10$$

*When graphing conditional inequalities, indicate the numbers that will make them true.*

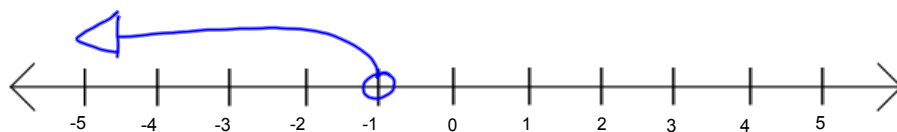
Graph on a number line:  $x \neq 2$

$$x \geq 2$$



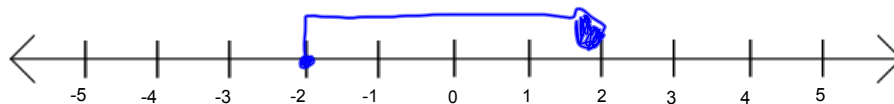
Graph on a number line:  $x \neq -1$

$$x < -1$$



Graph on a number line:  $x \neq -2$

$$x \geq -2$$



# Assignment

## Problem Set 89

**\*A/B Optional:** #1-7, 9, 11, 13-15, 19-20, 23

