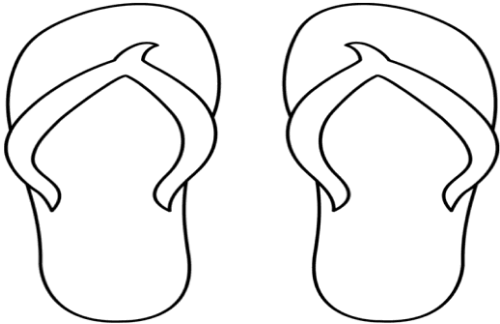


Writing Inequalities

inequality



Order matters! Always read the _____ first!!!

There are 3 parts to an inequality.

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If you "flip flop" the sides of an _____,
you _____ also "flip flop" the inequality _____.

Inequality Symbols				
SYMBOL	$<$	$>$	\leq	\geq
KEY PHRASES	<ul style="list-style-type: none"> Is less than Is fewer than 	<ul style="list-style-type: none"> Is greater than Is more than 	<ul style="list-style-type: none"> Is less than or equal to Is at most Is no more than 	<ul style="list-style-type: none"> Is greater than or equal to Is at least Is no less than

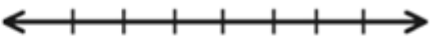
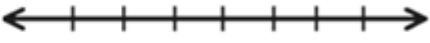
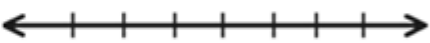

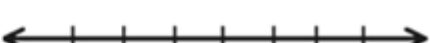
Together: Write each statement as an inequality.

A number w is less than 12	18 is more than the number x
A number y is no more than 7	You must be at least 18 to vote.

Pause & Try:

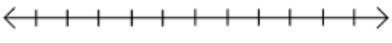


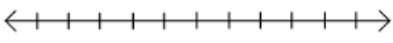
10 is no less than r	A number y is fewer than 3
37 is greater than a number p	You can eat at most 12 cookies.

Graphing Inequalities

$<$	\circ	$x < 4$	EXAMPLE: 
\leq	\bullet	$x \leq 6$	EXAMPLE: 
$>$	\circ	$x > -2$	EXAMPLE: 
\geq	\bullet	$x \geq -1$	EXAMPLE: 
\neq	\circ	$x \neq 3$	EXAMPLE: 

1. _____ a simple number line. Always _____ zero.
2. Mark the spot of the given _____.
3. Check the inequality _____ to decide if it is an open or closed circle.
4. Draw an _____ from the circle going in the same direction the inequality symbol _____. This will show ALL solutions of the inequality!
5. Test some numbers: one to the _____ and one to the _____.

Pause & Try:

$x < 3$ 	$x > -4$ 
$x \leq 2$ 	$x \geq 5$ 

SOLVING Inequalities

Addition & Subtraction Property of Inequalities

Example:

$$3 + x < 10$$

Multiplication & Division Property of Inequalities

1. Draw _____ tracks on each side of the inequality sign.
2. _____ the variable and anything attached to it.
3. Use the _____ operation to isolate the variable.
4. _____ the solution on a number line.
5. Always include _____ on your number line.

Together: Solve and graph

① $w - 5 \leq 15$

② $6b \geq 48$

③ $p - \frac{1}{4} \geq 2$

Pause and Try: Solve and Graph

① $w - 8 \leq 12$

② $\frac{z}{4} < 7$

③ $7b \geq 56$