Unit 1 Inequalities

Solving Inequalities:

Rule: If you multiply or divide by a negative number then flip the inequality sign.

Example: $-4x < 10$

$\frac{-4x}{-4} < \frac{10}{-4}$ Divide both sides by -4

$x > -\frac{5}{2}$ Flip the inequality sign and reduce the fraction

Graphing inequalities:

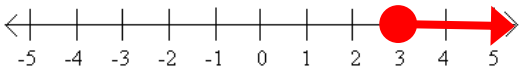
Rule: Graphing inequalities:

> or < will graph using an open circle
Whereas
$\geq or \leq$ will graph using a closed circle

Example: $x < 3$

and

$x \geq 3$



Interval notation:

Rule: Writing inequalities in Interval notation:

> or < will use parenthesis, (or)
Whereas
$\geq or \leq$ will use brackets, [or]

$-\infty$ and ∞ will always use parenthesis, (or)

Example: $x < 3$ interval notation: $(-\infty, 3)$

And

$x \geq -2$ interval notation: $[-2, \infty)$