

GRAPHING INEQUALITIES AND NOTES

Equality and Inequality



$=$ equal

\neq not equal

$>$ greater than

$<$ less than

\geq greater than or equal

\leq less than or equal

Symbol	Meaning	Closed or Open Circle
$<$	Less Than	Open \circ
$>$	Greater Than	Open \circ
\leq	Less Than or Equal to	Closed \bullet
\geq	Greater Than or Equal to	Closed \bullet

******Before graphing, follow steps to solve for one or two step equations/inequality.******

Rule---the arrow goes the way the $< >$ sign is pointing.

Exception to the rule. When the variable is on the right of the $<, >, \leq, \geq$ sign you can

a.-- Switch variable to left of sign, by doing this you must also switch the sign

b.-- the arrow would go opposite the $<, >, \leq, \geq$ sign

EX A. Switch & Flip

$$\begin{array}{r|l} 12 > 2y + 4 \\ -6 & -6 \\ \hline 6 > 2y \\ \frac{6}{2} > \frac{2y}{2} \\ 3 > y \\ y < 3 \end{array}$$

EX. B

$$\begin{array}{r|l} 9 \leq \frac{2}{3} \\ 3 \cdot 9 \leq \frac{2}{3} \cdot 3 \\ 27 \leq 2 \end{array}$$

*WHEN \times or \div
By A NEGATIVE,
You Flip the Sign

$$\begin{array}{r|l} \text{EX. } -2p + 1 \leq 3 \\ -1 & -1 \\ \hline -2p \leq 2 \\ \frac{-2p}{-2} \geq \frac{2}{-2} \\ p \geq -1 \end{array}$$

