

## Inequalities

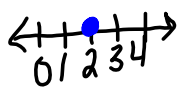
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$>$  or  $<$   $\leadsto$  Greater than or less than

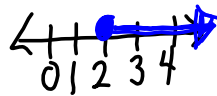
$\geq$  or  $\leq$   $\leadsto$  Greater than or Equal to or less than or Equal to

\* Graph Solutions on a Number line

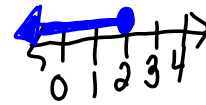
①  $x = 2$



②  $x \geq 2$



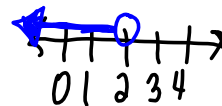
③  $x \leq 2$



④  $x > 2$



⑤  $x < 2$



Feb 12-10:10 AM

Rules

$>$  or  $<$   $\leadsto$  Open circle  $\circ$

$\geq$  or  $\leq$   $\leadsto$  Closed circle  $\bullet$

less  $\rightarrow$  Shade Left

Greater  $\rightarrow$  Shade Right

Solve & Graph Each Inequality

①  $x + 4 < 12$

$$\begin{array}{r} x + 4 < 12 \\ -4 \quad -4 \\ \hline x < 8 \end{array}$$



②  $x - 2 \leq -5$

$$\begin{array}{r} x - 2 \leq -5 \\ +2 \quad +2 \\ \hline x \leq -3 \end{array}$$

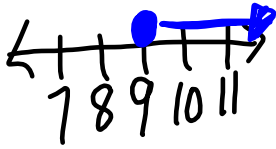


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$$\textcircled{3} \quad \frac{27}{3} \leq \frac{3x}{3}$$

$$9 \leq x$$

$$\boxed{x \geq 9}$$



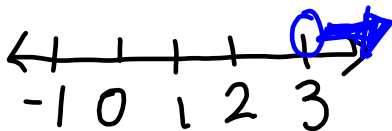
If you flip-flop  
the order you  
MUST flip-flop  
the sign

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on own

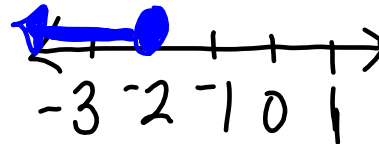
$$\textcircled{1} \quad \begin{array}{r} x - 5 > -2 \\ +5 \quad +5 \\ \hline \end{array}$$

$$\boxed{x > 3}$$



$$\textcircled{2} \quad \begin{array}{r} -4 \geq \frac{2x}{2} \\ \hline \end{array}$$

$$\boxed{\begin{array}{l} -2 \geq x \\ x \leq -2 \end{array}}$$



Feb 10-9:42 AM