

Algebra I MONDAY 10-22-12 Class Notes

= EQUATION, A MATH expression
WITH AN EQUALS SIGN

$<, >, \leq, \geq$ "NOT" EQUATION
INEQUALITY, A MATH
EXPRESSION WITH ONE
OF THE $<, >, \leq, \geq$ symbols

Ch. 2-1 to 2-4 Reference

GRI Golden Rule of Inequalities
"Whatever you do to ONE side,
do to the other" AND
if you multiply or divide
by a negative flip the
inequality symbol.

- How to graph solution
 - for $<, >$
 - for $\leq, \geq$

=
Equation

A math expression with an equal sign

INEQUALITY

A MATH expression with $<, >, \leq, \geq$

$$\begin{array}{r} 3 < 12 \\ -2 \quad -2 \\ \hline 1 < 10 \checkmark \end{array}$$

$$\begin{array}{r} 3 < 12 \quad +, - \\ +2 \quad +2 \\ \hline 5 < 14 \checkmark \end{array}$$

$$\begin{array}{r} 2 \cdot 3 < 12 \cdot 2 \\ \hline 6 < 24 \checkmark \end{array}$$

$$\begin{array}{r} \frac{3}{3} < \frac{12}{3} \quad \cdot, \div \\ \hline 1 < 4 \checkmark \end{array}$$

$$\begin{array}{r} -2 \cdot 3 < 12 \cdot -2 \\ \hline -6 > -24 \end{array}$$

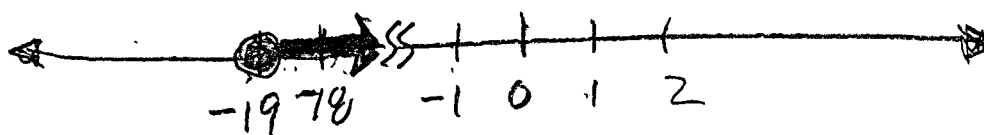
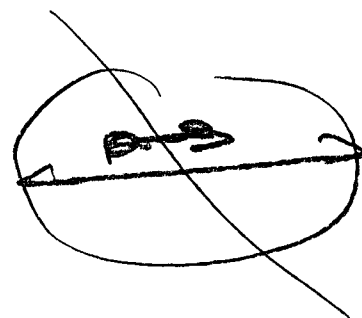
$$\begin{array}{r} \frac{3}{-3} < \frac{12}{-3} \\ \hline -1 > -4 \end{array}$$

$$\textcircled{1} \quad -7 \leq k \overset{+}{\underset{-}{-12}}$$

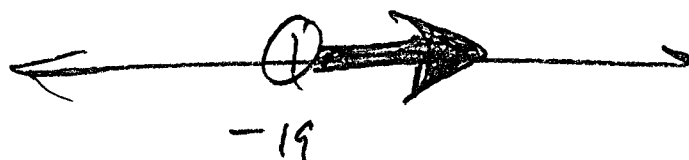
$$\begin{array}{ccc} & \downarrow & \\ -7 \leq & k & + 12 \\ -12 & & -12 \end{array}$$

$$-19 \leq k$$

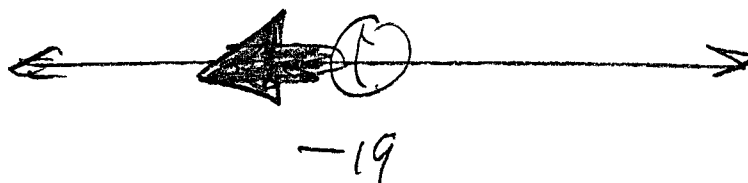
$$k \geq -19$$



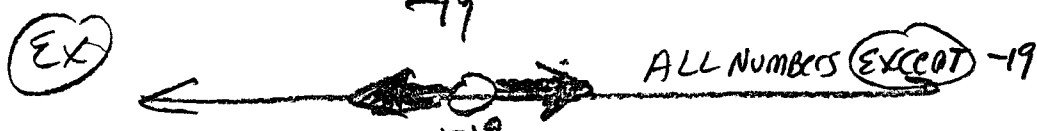
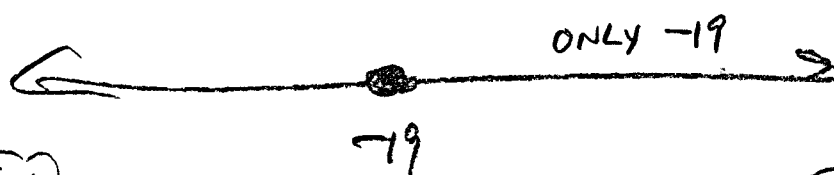
$$\textcircled{\text{EX}} \quad k > -19$$



$$\textcircled{\text{EX}} \quad k < -19$$



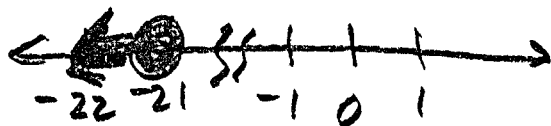
$$\textcircled{\text{EX}} \quad k = -19$$



$$\textcircled{7} \quad 7 \cdot -3 \geq \frac{P}{7} \cdot 7$$

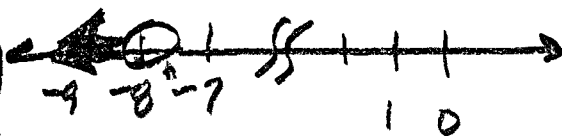
$$-21 \geq P$$

$$P \leq -21$$



$$\textcircled{8} \quad \frac{-8N}{-8} > \frac{64}{-8}$$

$$N < -8$$



$$\textcircled{39} \quad -17 < 5(N-4) + 6(N-5)$$

$$-17 < 5N - 20 + 6N - 30$$

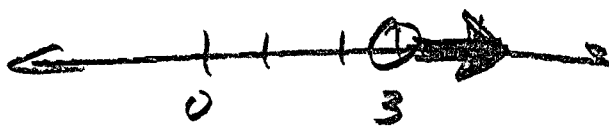
$$-17 < 11N - 50$$

$$+50 \quad +50$$

$$\frac{33}{11} < \frac{11N}{11}$$

$$3 < N$$

$$N > 3$$



$$\textcircled{49} \quad \frac{1}{\underline{\underline{5}}}b + \frac{33}{8} + \frac{9}{\underline{\underline{5}}}b < \frac{-59}{40}$$

$$40 \left(\frac{14}{5}b + \frac{33}{8} \right) < \frac{-59}{40} \cdot 40$$

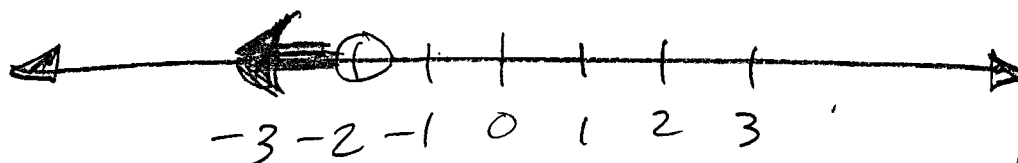
$$\begin{array}{rcl} 112b + 165 & < & -59 \\ -165 & & -165 \end{array}$$

$$\frac{112b}{112} < \frac{-224}{112}$$

$$\boxed{b < -2}$$

SPDN
0, 0

NOTE:
VICTORIA
GOT THIS
RIGHT WHEN
ASKED!!



NOTE:
SHE ASKED
THAT THIS
SPECIAL
EVENT BE
NOTED.