

Algebra 1

5.5

$| \quad | = \text{pos}$

Solve and graph absolute value inequalities

Write an absolute value inequality from a graph
inequality

absolute value

less than $< \leq$

greater than $> \geq$

floor graphs

whiteboards

speed dating

$$|x - 3|$$



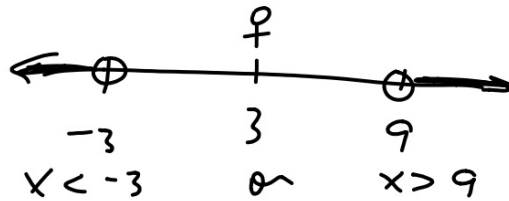
3

$$|0|$$



0

Practice problems:
Solve and graph



$$\frac{-3+9}{2} = \frac{6}{2} = 3$$

$$|x-3| > 6$$

$$\begin{array}{r} x-3 = -6 \\ +3 \quad +3 \\ \hline x = -3 \end{array}$$

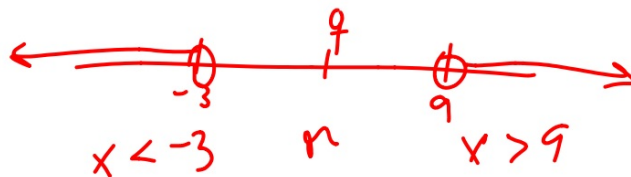
$$\begin{array}{r} x-3 = 6 \\ +3 \quad +3 \\ \hline x = 9 \end{array}$$

~~*~~ $|x-2| < 8$

→ $|2x-6| > \underline{12}$

→ $|3x-1| < \underline{14}$

→ $|5x+10| \leq \underline{25}$
↑



$$-4\frac{1}{3} < x < 5$$

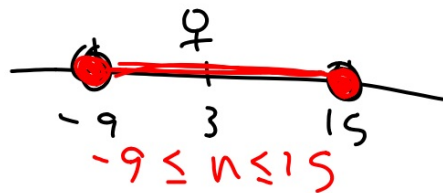
$$-7 \leq x \leq 3$$

$$|n-3| \leq 12$$

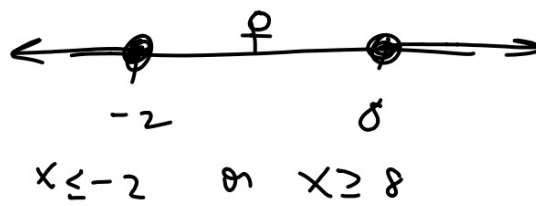
$$\begin{array}{rcl} n-3 & = & -12 \\ +3 & & +3 \\ \hline n & = & -9 \end{array}$$

$$\frac{15 + -9}{2} = \frac{6}{2}$$

$$\begin{array}{rcl} n-3 & = & 12 \\ +3 & & +3 \\ \hline n & = & 15 \end{array}$$



$$|2x-6| \geq 10$$



$$|5x-10| \leq 30$$

↑

