

Algebra 1

5.5

Solve and graph absolute value inequalities

Write an absolute value inequality from a graph
inequality

absolute value

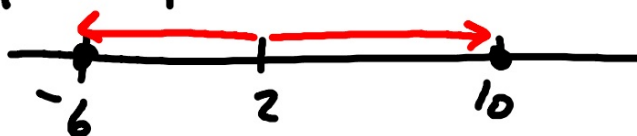
less than

greater than

floor graphs

whiteboards

$$|x-2| = 8$$



$$\begin{array}{r} x-2 = -8 \\ +2 \quad +2 \\ \hline x = -6 \end{array}$$

$$\begin{array}{r} x-2 = 8 \\ +2 \quad +2 \\ \hline x = 10 \end{array}$$

Practice problems:
Solve and graph

> dist. more outside
< dist less inside

$$|x-7|=8$$

$$|x-7| \geq 8$$

$$|x+1| < 7$$

$$|2x-3| > 19$$

★ $|3x-3| \leq 6$

$$|4x-12| \leq 20$$

$$\leq 20$$

$$\begin{array}{r} x-7 = -8 \\ \underline{+7 \quad +7} \\ x = -1 \end{array} \qquad \begin{array}{r} x-7 = 8 \\ \underline{+7 \quad +7} \\ x = 15 \end{array}$$

