

Name

# 5.6 Solve Absolute Value

3/10/21

Alg I

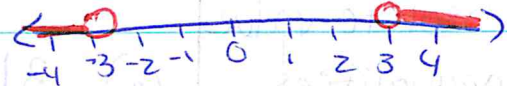
## Inequalities

L/A

I can solve absolute value inequalities.

$$|x| < 3 \text{ (and)}$$

$$|x| > 3 \text{ (or)}$$



Ch. 5 Quiz

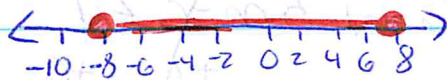
### Example 1:

$$1) |x| \leq 8$$

$$-8 \leq x \leq 8$$

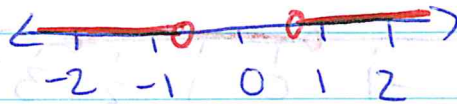
$$2) |u| < 3.5$$

$$-3.5 < u < 3.5$$



$$3) |v| > \frac{2}{3}$$

$$v > \frac{2}{3} \text{ or } v < -\frac{2}{3}$$

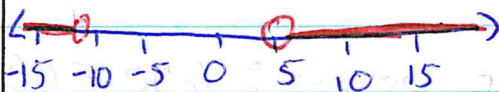


### Example 2:

$$4) |x+3| > 8$$

$$x+3 > 8 \text{ or } x+3 < -8$$

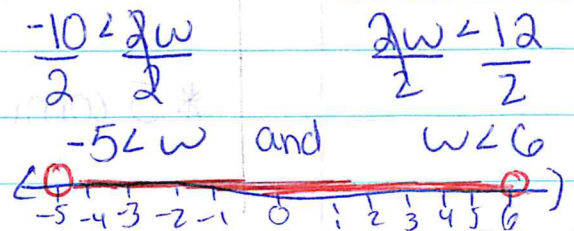
$$\begin{array}{r} x+3 > 8 \\ -3 \quad -3 \\ \hline x > 5 \end{array} \quad \begin{array}{r} x+3 < -8 \\ -3 \quad +3 \\ \hline x < -11 \end{array}$$



$$5) |2w-1| < 11$$

$$-11 < 2w-1 < 11$$

$$\begin{array}{r} -11 < 2w-1 \text{ and } 2w-1 < 11 \\ +1 \quad +1 \quad \quad \quad +1 \quad +1 \\ \hline -10 < 2w \quad \quad \quad 2w < 12 \\ \frac{-10}{2} < \frac{2w}{2} \quad \quad \quad \frac{2w}{2} < \frac{12}{2} \\ -5 < w \text{ and } w < 6 \end{array}$$



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## Inequalities

I can solve absolute value inequalities.

Example 3:

$$6) \quad 3|5m - 6| - 8 \leq 13$$

$$\qquad \qquad \qquad +8 \quad +8$$

Ch. 5 Quiz

$$\frac{3|5m - 6| \leq 21}{3 \quad 3}$$

$$|5m - 6| \leq 7$$

\* Complete

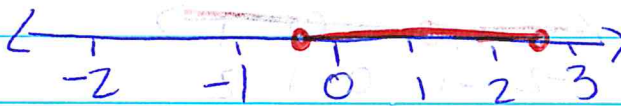
$$-7 \leq 5m - 6 \leq 7$$

Skills Practice,

$$-7 \leq 5m - 6 \text{ and } 5m - 6 \leq 7$$

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$$\begin{array}{r} +6 \quad +6 \quad +6 \quad +6 \\ \hline -1 \leq 5m \quad \quad 5m \leq 13 \\ \hline \frac{-1}{5} \leq m \quad \quad m \leq \frac{13}{5} \\ \hline -\frac{1}{5} \leq m \quad \text{and} \quad m \leq 2\frac{3}{5} \end{array}$$



Example 4:

$$7) \text{ Mean} = 664 \quad |x - 664| \leq 75$$

$$-75 \leq x - 664 \text{ and } x - 664 \leq 75$$

$$\begin{array}{r} +664 \quad +664 \quad +664 \quad +664 \\ \hline 589 \leq x \quad \quad \text{and} \quad x \leq 739 \end{array}$$

\* 5 computer prices: 650, 660, 670, 650, 725