

Class examples

$$\textcircled{1} |x+1| - 9 = -9$$

+9 +9

$$|x+1| = 0$$

$$x+1 = 0$$

-1 = -1

$$x = -1$$

step 1. Isolate
| |

only 1 equation
0 does not have
a positive or
negative value

$$\textcircled{2} \quad |5+x| - 3 = -2$$

$$\quad \quad \quad +3 \quad +3$$

$$|5+x| = 1$$

$$5+x=1 \quad \text{or} \quad 5+x=-1$$

$$\begin{array}{r} -5 \\ \hline \end{array}$$

$$\begin{array}{r} -5 \\ \hline \end{array}$$

$$x = -4$$

$$x = -6$$

$$\textcircled{3} \quad 7 + |x-8| = 6$$

$$\quad \quad \quad -7$$

$$\quad \quad \quad -7$$

$$|x-8| = -1$$

no solution or \emptyset
special case

| | \neq negative number