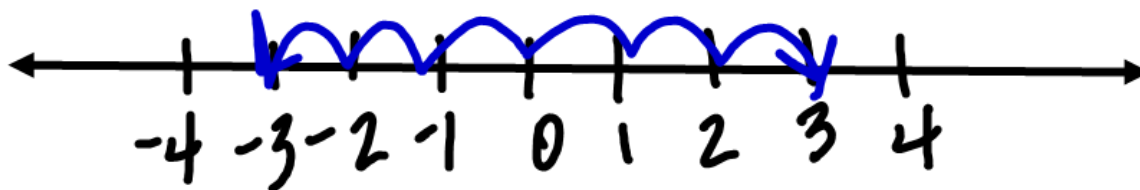
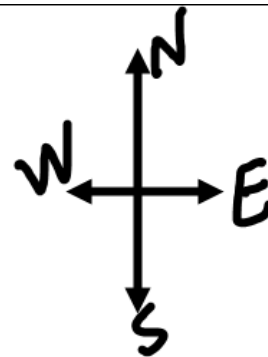


# Absolute Value



$$|3| = 3 \quad |-3| = 3$$

Solve  $|x| = 3$

$$x = 3 \text{ or } -3$$

Equality  $|7| = 7$

$$|x-4| = 7 \quad |-7| = 7$$

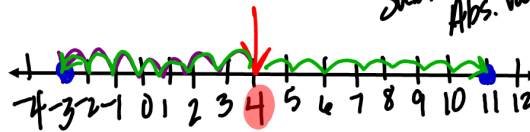
Set up 2 equations

$$x-4 = 7 \quad \text{OR} \quad x-4 = -7$$

Solve  $x = 11$  OR  $x = -3$

$$|x-4| = 7$$

Distance  
between 2 pts  
Subtract  
Abs. Value



The distance between a number and 4 is 7

$$|x+2| = 5$$

Set up 2 equations

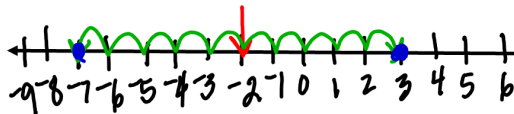
$$x+2 = 5 \quad \text{OR} \quad x+2 = -5$$

$$x = 3 \quad \text{OR} \quad x = -7$$

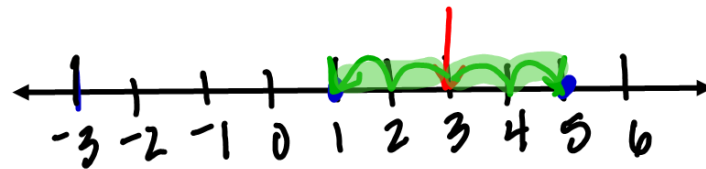
$$|x+2| = 5$$

$$|x-2| = 5$$

Distance  
Subtract  
Absolute  
Value



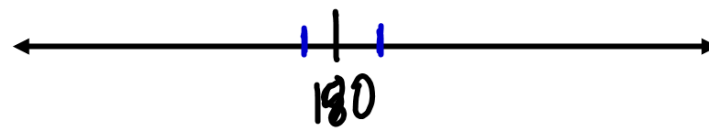
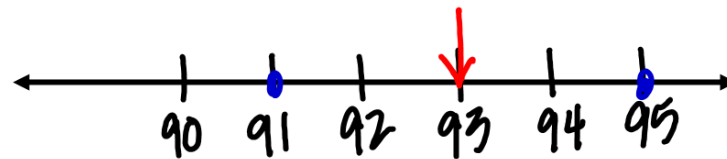
The distance between a number and negative 2 is 5.



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

The distance between a number and 3 is 2.

$$|x - 3| = 2$$



$$\frac{-|x-7|}{-1} = \frac{8}{-1}$$

$$|x-7| = -8 \quad \text{No Solution}$$

$$\frac{-|x-3|}{-1} = \frac{-4}{-1}$$

$$|x-3| = 4$$

$$x-3 = 4 \quad \text{OR} \quad x-3 = -4$$

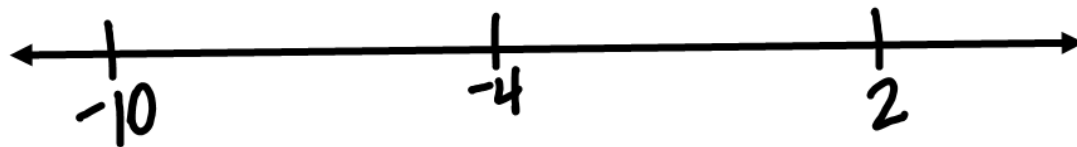
$$x = 7 \quad \text{OR} \quad x = -1$$

$$|x+4| + 2 = 8$$

$$|x+4| = 6$$

$$x+4 = 6 \quad \text{OR} \quad x+4 = -6$$

$$x = 2 \quad \text{OR} \quad x = -10$$



pb8  
26-38E

$$|8 - x| = 1$$

$$\overset{-8}{8} - x = 1 \quad \text{OR} \quad \overset{-8}{8} - x = -1$$

$$\cancel{-x} = -7 \quad \text{OR} \quad \cancel{-x} = -9$$

$$x = 7 \quad \text{OR} \quad x = 9$$

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

$$-x + 8 = 1 \quad \text{OR} \quad -x + 8 = -1$$