What would have to be true for a compound inequality using the word **AND** to have NO SOLUTION?

- There are no numbers that make both inequalities true.
- Graphs of inequalities don't overlap anywhere.

What would have to be true for a compound inequality using the word **AND** to have a solution of ALL REAL NUMBERS?

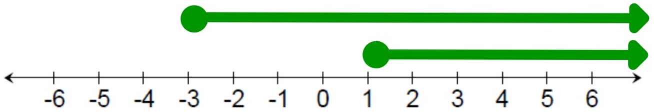
- The solution to BOTH inequalities must be All Real Numbers.
- Both graphs must be the entire number line.

What would have to be true for a compound inequality using the word **OR** to have NO SOLUTION?

- Both inequalities must be NO SOLUTION.

What would have to be true for a compound inequality using the word **OR** to have a solution of ALL REAL NUMBERS?

- The solutions to the two inequalities combined must contain all real numbers.
- Graphs must point in opposite directions and overlap.



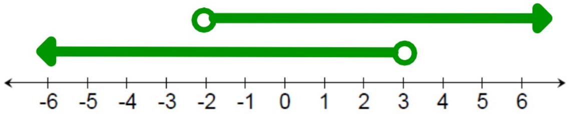
What is the solution to the above compound inequality using the word....

AND

$w \geq 1$

OR

$w \geq -3$



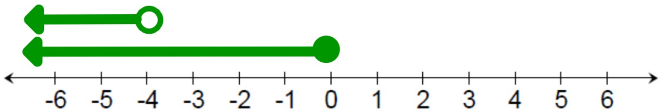
What is the solution to the above compound inequality using the word....

AND

$-2 < x < 3$

OR

$\mathbb{R}$



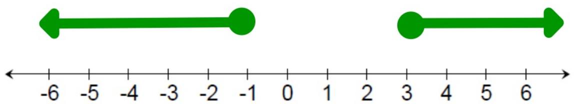
What is the solution to the above compound inequality using the word....

AND

$A < -4$

OR

$A \leq 0$



What is the solution to the above compound inequality using the word....

AND

NO Sol

OR

$w \leq -1$ OR $w \geq 3$

Solve. $4x - 2(x + 6) - 9 > 5(x + 3) + 2 - 3x$

$$4x - 2x - 12 - 9 > 5x + 15 + 2 - 3x$$

$$2x - 21 > 2x + 17$$

$$-2x \qquad -2x$$

$$-21 > 17$$

This is not true, therefore, this inequality will never be true.

NO SOLUTION

Solve for X. State restrictions on the variables.

$$AX\left(\frac{G}{A}\right) = \left(\frac{M - KX}{X} + C\right)XA$$

$$GX = A(M - KX) + ACX$$

$$GX = AM - AKX + ACX$$

$$GX + AKX - ACX = AM$$

$$\frac{X(\cancel{G + AK - AC})}{\cancel{G + AK - AC}} = \frac{AM}{G + AK - AC}$$

$$\boxed{X = \frac{AM}{G + AK - AC}}$$

$X \neq 0$, $A \neq 0$ } $A, X \neq 0$

$G + AK - AC \neq 0$

Solve for W State restrictions on the variables.

$$GW - R = A(W + Q)$$

$$GW - R = AW + AQ$$

$$-AW \qquad -AW$$

$$GW - AW - R = AQ \qquad +R$$

$$+R$$

$$GW - AW = AQ + R$$

$$\frac{W(G - A)}{G - A} = \frac{AQ + R}{G - A}$$

$$\boxed{W = \frac{AQ + R}{G - A} \qquad G - A \neq 0}$$

Evaluate for A = -16 B = 12 C = -8

$-C + 2B^2 - A^2 - AC$

$$= -(-8) + 2(12)^2 - (-16)^2 - (-16)(-8)$$

$$= + 2(144) - (256)$$

$$= 8 + 288 - 256 - 128$$

$$= -88$$