

**Inequalities:**

- not equal to
- equal to

$x > -2$   
 $-3 < x \leq 4$   
 $x \geq 5$

**Interval Notation**

$(-2, \infty)$   
 $(-3, 4]$   
 $[5, \infty)$

$\overbrace{\quad \# \quad , \quad \# \quad }^{\text{symbols}}$   
 (parentheses) if  $x$  is not equal to ○  
 if  $\#$  is  $-\infty$  or  $\infty$   
 [brackets] if  $x$  is equal to ●

\* When you multiply/divide by a negative #, you must flip the inequality sign

$4 - 2x \leq 8$   
 $-4 \quad -4$   


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 $-2x \leq 4$   
 $\frac{-2x}{-2} \overset{\text{flip}}{\downarrow} \frac{4}{-2}$   
 $x \geq -2$

$[-2, \infty)$

$-3 < 4x + 1 \leq 9$   
 $-1 \quad -1 \quad -1$   


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 $-\frac{4}{4} < \frac{4x}{4} \leq \frac{8}{4}$   


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 $-1 < x \leq 2$

$(-1, 2]$