

CP Algebra 2  
Notes: Inequalities

Name: \_\_\_\_\_

**Interval Notation and Graphing Inequalities:**

[ EX 1 ]       $x \leq 12$

[ EX 2 ]       $x > -5$

[ EX 3 ]       $2 < x \leq 7$

[ EX 4 ]       $x < 2$  or  $x > \sqrt{11}$

[ EX 5 ]       $x \leq 8$  and  $x > 10$

[ EX 6 ]       $x < -2$  or  $x \leq -1$

[ EX 7 ]       $x \leq 10$  and  $x > \sqrt{5}$

[ EX 8 ]       $x > 7$  or  $x \geq 12$

[ EX 9 ]       $x < 17$  and  $x > 0$

[ EX 10 ]       $|x| \geq 4$

[ EX 11 ]       $|x| < 9$

**Key Items with Inequalities:**

1.)

2.)

**Solve each Inequality. Graph the answer, then write the answer in Interval Notation.**

1.)  $\frac{2}{3}x - 7 < 2x + 6$  or  $\sqrt{18}x - 4 \geq 12$

2.)  $2x - 5 < 8x + 1$  and  $-3x - 5 > 1$

3.)  $15 - |2x - 5| < 4$

4.)  $4 + \sqrt{32}|3x - \sqrt{8}| < 10$

**Key Items with Absolute Value Inequalities:**

1.)

2.)