Unit 5 Objective 3 – Remediation
Graphing Compound Inequalities on a Number Line

Review on graphing inequalities:
- First, identify the compound inequality as a Conjunction (And) or a Disjunction (Or).
- If the compound inequality is a Conjunction (AND) you be shading between the two numbers.
- If the compound inequality is a Disjunction (OR) you will be shading in opposite directions.
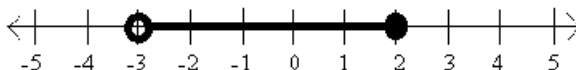
1) **Graph: $-3 < x \leq 2$**

   This is a Conjunction since x is between the two numbers.
   Put an open dot on -3 since it is a $<$ symbol – x is greater than -3
   Put a closed dot on 2 since it is a $\leq$ symbol – x is less than or equal to 2
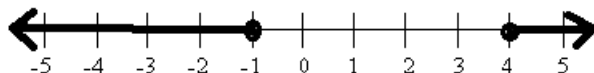   Shade between the two numbers.

2) **Graph: $x \leq -1$ OR $x \geq 4$**

   This is a Disjunction since there is an OR
   Put a closed dot on -1 since it is a $\leq$ symbol – x is less than -1
   Put a closed dot on 4 since it is a $\geq$ symbol – x is greater than or equal to 4
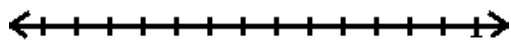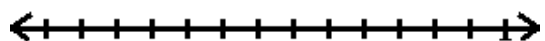   Shade the tails since this is a disjunction.

Now it's your turn!
Complete the problems on the back of this worksheet

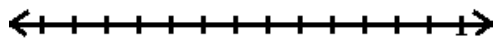**Graph each compound inequality on the number line provided.**

1) $-3 \leq x < 1$
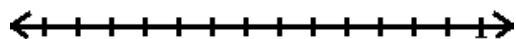
2) $x \geq 3$ OR $x \leq -1$
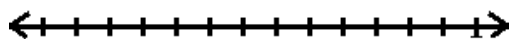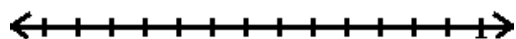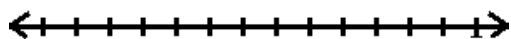
3) $-3 \leq x \leq 0$

4) $2 > x > -3$

5) $x < -3$ OR $x \geq 2$
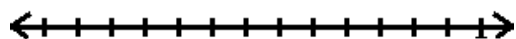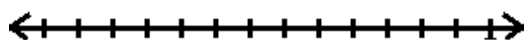
6) $-1 < x$ OR $x < -3$

7) $x \geq 0$ OR $x \leq -3$

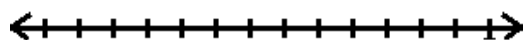8) $-1 < x \leq 3$

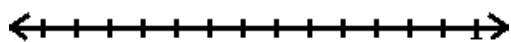9) $-6 \leq x \leq -4$

10) $x > 3$ OR $x < 1$

11) $x \geq 5$ OR $x < 3$

12) $-3 < x \leq 2$