**GUIDED NOTES**

**DIRECTIONS:** Use each of the examples below to define each of the different **ROTATIONS.** Write any notes, comments, remarks below each of the graphs. Use a different color to draw the new line.

|  |  |
| --- | --- |
| **Example 1**  ***Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** | **Example 2**  ***Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** |
| Rotate the given line **270°** (90° counter-clockwise) and state the type of lines, if any that result.    **NOTES / COMMENTS / REMARKS** | Rotate the given line 180° and state the type of lines, if any that result.  **NOTES / COMMENTS / REMARKS** |
| **Example 3**  ***Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** | **Example 4**  ***Equation:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** |
| Reflect the given line first over the line . What type of lines if any result?  **NOTES / COMMENTS / REMARKS** | Reflect the given line first over the x-axis, then over the y-axis. What type of lines if any result?    **NOTES / COMMENTS / REMARKS** |

**IN YOUR GROUPS**

**DIRECTIONS:** Follow the instructions using the coordinate plane on the right. You will need two (2) different color pen/pencils, one (1) for **graph #1** and one (1) for **graph #2**.



**Graph #1: Equation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Write an equation for the new line \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Reflect the line over the y-axis
3. Name and define the pair of lines this reflection created

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How can you be sure that these lines are in fact the type you named?
2. Describe the steps you followed or the process that you used to reflect the line



**Graph #2: Equation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Write an equation for the new line \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Rotate the line on the graph 90° clockwise
3. What type of angle is formed by the pair of lines? \_\_\_\_\_\_\_\_\_\_\_\_
4. Name and define the type of lines created by the rotation
5. How can you be sure these lines are in fact the type that you named?
6. Describe the steps you followed or the process you used to rotate the line

**SUMMARY: *Fill in the blanks***

* **PARALLEL lines have \_\_\_\_\_\_\_\_\_\_\_\_ slopes**
* **PERPENDICULAR lines have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ slopes**