Name _____

Common Graphs Investigation

1. Using your graphing calculator, compare the graph of $y = x$ to $y = -x$. How are the graphs alike? How are the graphs different?

2. Using your graphing calculator, graph the equations $y = x$ and $y = x+2$ simultaneously. How does adding 2 to the equation change the graph?

3. Using your graphing calculator, compare the equations $y = 5$ and $x = 5$. What do you notice?

4. Using your graphing calculator, compare the graphs $y = x^2$ to $y = -x^2$. How are the graphs alike? How are the graphs different? How does a linear function differ from a quadratic function?

5. Using your graphing calculator, graph the equations $y = | x |$ and $y = | -x |$. What do you notice?

6. Explore ways to change the equation of the common relations listed above and view their graphs. Below, write the equations you explore and draw the graphs of the equations. Explain the changes in the graphs as they relate to changes in the equations.