**3. a). Sketch the graphs of using different colors and label the graph with the equation.**



**b). Describe the transformations that occurred using -60 and 90.**

**This transformation is called a phase shift.**

**These transformations hold true for both the cosine and tangent functions as well. To summarize**



**Steps to graphing without a calculator:**

1. **Graph the new midline, max line and minimum if applicable.**
2. **Determine the period.**
3. **Apply any phase shifts & graph following the patterns of the parent function.**

 **Sine = midline, max, midline, minimum, midline**

 **Cosine = max, midline, minimum, midline, max**

 **Tangent = midline, asymptote, midline**