Project: Modeling Periodic Phenomena with Sinusoidal Functions
## Cedar Grove High School - Precalculus

Scenario:

Your company is considering opening a branch in a new location. You are part of the team that will research the location. The team lead asks you to focus on the climate of the new location. As part of your work, you will build a mathematical model for predicting the average monthly temperature.

Part 1:

1. Choose a location and get approval from your teacher. Each student must choose a different location.

2. Research the climate of your location. Write the location and a brief description here in complete sentences.

3. Find monthly temperature data for your selected region. Paste the source of your data and any associated tables or graphs here.

4. Create an account at Desmos.com (you can log in with Google). This will allow you to save your work. Create a table and enter monthly data for a year. Then enter it again so that you have 2 cycles. Remember to use a number to enter the month (e.g. 0= January or 1 = January).
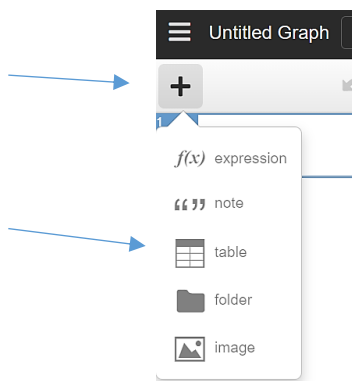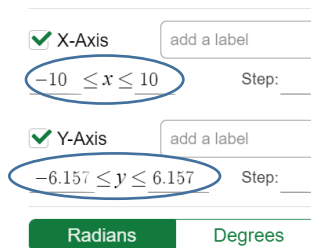

   Click on *Untitled Graph* to change the title. Naming convention: Student Location
   Then click Save.

5. Change the settings.

    a. Click on wrench in top right corner
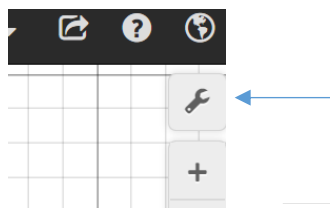
    b. Change the minimum and maximum for
        x and y so that the data points are visible.
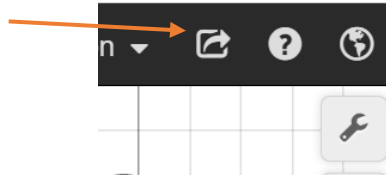   The step is how you wish to number each axis.

    c. Think about what your independent variable (x)
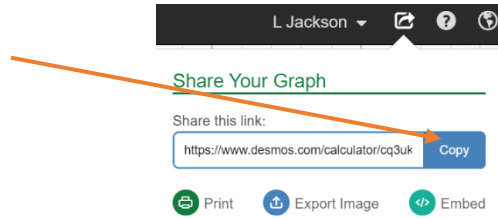   and your dependent variable (y) represent,
        then fill in the labels.

6. Share your work for part 1 with Ms. Jackson.

   a. In top right corner click share arrow

   b. Click copy

   Share Your Graph

   Share this link:
   https://www.desmos.com/calculator/cq3uk   Copy

   Print   Export Image   Embed

   c. Paste the link here: