Name_____

Analysis

Answer the questions in complete sentences.

1) What are the maximum, minimum and average temperatures?

2) Double-click on **d:=** and define an initial estimate for the vertical translation as
$d := \dfrac{(temp\ max + tempmin)}{2}$. How does changing d affect the graphs of f(x) and g(x)?

3) Redefine the amplitude as $a := \dfrac{(temp\ max - temp\ min)}{2}$. How does changing a affect the graphs of f(x) and g(x)?

4) Find the period of your graph. Redefine $b := \dfrac{2\pi}{your\ period}$. How does changing b affect the graphs of f(x) and g(x)?

5) The horizontal shift for f(x) is c1. Adjust c1 until you have a good fit. How does changing c1 affect the graph of f(x)?

The horizontal shift for g(x) is c2. Adjust c2 until you have a good fit. How does changing c2 affect the graph of g(x)?

6) What is the significance of the value of d for this data set?

7) What is the significance of the value of a for this data set?

8) What is the significance of the value of c1 and c2 for this data set?

9) Print out page 1 of your TI Interactive file and turn it in with this worksheet.

Climate and Temperature: Sinusoidal Models

_____
(city, state)

Copy the graphs from your TI Interactive file to the graphs below. Include titles, labels, and intervals on the graphs. Complete the requested information to the right of the graph.
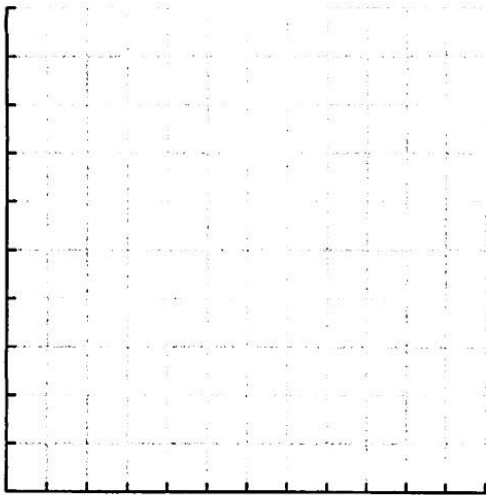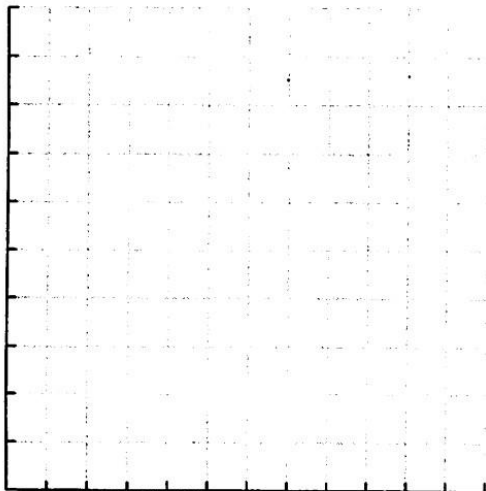
Equation:

Period:

Phase Shift:

Amplitude:

Vertical Translation:

Equation:

Period:

Phase Shift:

Amplitude:

Vertical Translation: