

Project: Meteorology The table shows the monthly normal daily high temperature (in degrees Fahrenheit) for Phoenix, Arizona P and Seattle, Washington S . In the table, t represents the month, with $t = 1$ corresponding to January. (Source: U.S. Department of Commerce)

Month, t	P	S
1	65.0	46.9
2	69.4	50.5
3	74.3	54.5
4	83.0	59.3
5	91.9	64.9
6	102.0	69.5
7	104.2	74.5
8	102.4	74.9
9	97.4	69.9
10	86.4	60.3
11	73.3	51.5
12	65.0	46.5

- Use the *sine regression* feature of a graphing utility to find sine models to fit each set of data.
- Use the graphing utility to graph each model from part (a) with the original data. How well does each model fit the original data?
- A monthly normal daily high temperature of 50°F is reported. Determine the month(s) in which this high temperature is most likely reported in each city, if possible. Explain your results.
- A mean monthly temperature of 66°F is reported. Determine the month(s) in which this temperature is most likely reported in each city, if possible. Explain your results.
- A mean monthly temperature of 73°F is reported. Determine the month(s) in which this temperature is most likely reported in each city, if possible. Explain your results.
- A mean monthly temperature of 85°F is reported. Determine the month(s) in which this temperature is most likely reported in each city, if possible. Explain your results.