Math 130

Project

Angle of Elevation

By this time you should have collected six data points for the angle of elevation of the sun at Skyline (Latitude: 37.63 N), Tuesdays at 9:00AM (DST). The objective of this project is to develop a model for the angle of elevation of the sun at Skyline (at 9:00AM) as function of time.

Date	Angle of Elevation
11/3	_____
11/10	_____
11/17	_____
11/24	_____
12/1	_____
12/8	_____

Consider the following assumptions in developing your model.

- The angle of elevation of the sun is cyclic – it repeats yearly.
- The lowest angle of elevation occurs at the winter solstice (12/21).

Use your result to answer the following questions.

(a) Find $f(10)$ and interpret the result.

(b) Use your model to predict the angle of elevation of the sun at Skyline during the week of April 15.

(c) Discuss the accuracy of your model. Identify any shortcomings to deriving the model the way we did.