Homework 3, Stat 221, due Thu Mar 2 at the beginning of class.

From the Shumway and Stoffer textbook, 3rd edition, problems 4.5, 4.8, and 4.25.
In the 2nd edition, these are similar to problems 4.5, 4.8, and 4.25. However, problem 4.8 is
a bit different and I want you to do the 3rd edition version. The dataset should be called
sunspotz.

4.8. Figure 4.31 shows the biyearly smoothed (12 month moving average)
number of sunspots from June 1749 to December 1978 with n = 459
points that were taken twice per year; the data are contained in sunspotz.
With Example 4.10 as a guide, perform a periodogram analysis
identifying the predominant periods and obtaining confidence intervals
for the identified periods. Interpret your findings.