Q1. Using the following plots of SP index from 1936 to 1978, describe any noticeable patterns.

Q2. Suppose $Y_t = 6 + 2.4t + X_t$ where $\{X_t\}$ is a white noise process with $\sigma_e^2 = 1$.
   a) Compute the autocovariance function for this model
   b) Is $\{Y_t\}$ stationary? Why or why not?