Assignment No. 2

1. Using an Internet mapping page (an example is mapquest.com), create a map of your neighborhood and answer the following questions:
    a. How is the map like a model?
    b. What are the limitations of the map?
    c. Could you use this map to determine change in elevation in your neighborhood? Distance from one place to another? Traffic speed? What do your answers suggest about what to consider when using a map or a model?

2. The Economic Report of the President contains statistical information about the economy as well as the Council of Economic Advisers' analysis of current policy issues. Find a recent copy of this annual report at the library and read a chapter about an issue that interests you. Summarize the economic problem at hand and describe the council's recommended policy.

3. Would you expect economists to disagree less about public policy as time goes on? Why or why not? Can their differences be completely eliminated? Why or why not?

4. Please write brief but complete answers:
    a. What is the basic economic problem?
    b. What three problems must any economic system solve?
    c. How does capitalism solve these three problems?
    d. How does Soviet-style socialism solve these three problems?
    e. Can you think of any reason inherent in a centrally planned economy (Soviet-style socialism) that would make innovation difficult? Can you think of any reason inherent in a capitalist country that would foster innovation?

5. Why do most economists oppose trade restrictions?

6. STATA exercise:
    a. Go to the web site of the Federal Reserve Bank of Sant Louis and look for the FRED database (www.stls.frb.org). Download the series of quarterly data for US Real Gross Domestic Product in Chained 1996 dollars, from 1950:1 to 2001:1.
    b. Plot the series against time.
    c. Compute the series of natural log of GDP and do a time plot for it. Compare this graph to the previous one.
    d. Decompose the GDP series into trend and cycle using a linear deterministic trend model, i.e. run the following regression: $y_t = \alpha + \beta t + \varepsilon_t$. Now use your estimates and fitted values to find the trend and the cycle of the original series (NOTE: Define the trend as the fitted values of the regression above (a+bt) where a and b are the OLS estimates for α and β and define the cycle as y_t minus the trend.)
    e. Plot in the same graph the trend (predicted values) and the original data against time.
    f. Plot the cycle against time. What can you say about the stationarity of the cycle (detrended) series?