Problem Set 1
(due Thursday, February 7)

Econ 513

1. Consider a small economy that exists for two years. The economy extracts an edible natural resource $Y_1 = 10$ in year 1 and $Y_2 = 15$ in year 2. Agents in this economy maximize the following utility function:

$$U = logC_1 + logC_2$$

where C_1 and C_2 is consumption in years one and two respectively. (note that there is no discounting of the future i.e. $\beta = 1$)

   a. What is the level of consumption in years 1 and 2 in this *closed* economy? What is the level of welfare?

   b. What is the equilibrium interest rate in this *closed* economy?

   c. Suppose that a country can borrow on the world capital markets at interest rate $r = 10\%$. What is the consumption in year 1 and year 2? What is the total welfare?

   d. What is the current account in year 1? What is the current account in year 2?

2. Describe the degree of openness of your country by answering the following questions:

   a. What is the share of international trade in GDP?

   b. What is the current account as percent of GDP?

   c. What is the share of foreign equity in total equity holdings?(do not worry about this part if you can't find the data)