Economics 227: Intermediate Macroeconomics
Problem Set #4

This assignment is due by 5PM on Tuesday, April 12th

1. Of U-1 through U-6, which do you think is the best measure of involuntary joblessness? Why?

2. Suppose the production function is given by $Y = K^{\alpha}L^{1-\alpha}$.

   (a) If the real wage is w and this economy has $K = 100$ units of capital, find the demand for labor $L^{d}(w)$.

   (b) Suppose $\alpha = \frac{1}{2}$. Find the equilibrium wage if the supply of labor is $L = 100$

   (c) If the government imposes a minimum wage of $\underline{w} = \frac{3}{4}$, how much unemployment does this generate?

   (d) Does the unemployment generated by the minimum wage rise or fall if $\alpha = \frac{3}{4}$?

   (e) Recall the elasticity of demand for labor is given by $\varepsilon_d = \frac{\%\Delta L^d}{\%\Delta w} = \frac{\partial L^d(w)}{\partial w}\frac{w}{L}$. Find the elasticity of demand for labor given arbitrary values of w and α.

   (f) Explain your answer to part (d) intuitively.

3. In March of 2005, Ben Bernanke said the following. (Ben Bernanke later became the Chairman of the U.S. Federal Reserve, which is the U.S. Central Bank.

   "I don't believe that the recent deterioration in the U.S. trade balance reflects economic policies and other developments within the U.S. itself. A satisfying explanation for the recent upward climb of the U.S. trade deficit requires a global perspective. To be more specific, over the past decade a combination of forces has created a significant increase in global saving – a global saving glut – which helps to explain the increase in the U.S. trade deficit."

   (a) What are some "economic policies and other developments within the U.S. itself" that could cause the increase in the trade deficit?

   (b) What effect would a global savings glut have on a small open economy?

   (c) Bernanke gave his speech at the height of the U.S. housing boom. Could a global savings glut help explain why there was a housing boom?