Economics 732: Monetary Economics II  
Spring 2003  
Cornell University  
Problem Set #4

I. One indivisible good.  
Sunspot equilibrium.

1. \( X_h = \{0, 1\}, h = 1, 2, \omega_1 = 1/5, \) and \( \omega_2 = 4/5. \) Solve for all equilibrium values of 
\[
(x_1(\alpha), x_1(\beta)), (x_2(\alpha), x_2(\beta)), 
(p(\alpha), p(\beta)),
\]
and 
\[
(\pi(\alpha), \pi(\beta))
\]
Which of these allocations is in the core? in the core for all replications?  
Redo the analysis for a continuous sunspot variable.

2. Replace the endowments in Problem 1 with \( \omega_1 = 6/10 \) and \( \omega_2 = 6/10. \)  
Answer all the questions in Problem 1.

3. Replace the endowments in Problem 1 with \( \omega_1 = 3/4 \) and \( \omega_2 = 1/4. \)  
Answer all the questions in Problem 1.

II. Write an essay comparing and contrasting the concepts of lottery equilibrium and sunspot equilibrium.