ECO 199 – GAMES OF STRATEGY
Spring Term 2004
PROBLEM SET 1
Due in class on Thursday February 26

Question 1 (15 points)

In the "21 flags" game from Survivor Thailand that was screened in the first session of the class, the teams alternate, taking 1, 2, or 3 flags at each turn. The team to take the last flag is the winner. The following table shows the actual choices of the two teams at each of their turns. You are asked to fill in the last column, showing what each should have chosen when it found itself in that situation. You can either copy out this table, or print out this page, write in your answers, and staple the sheet together with the rest of your answers. If you want to refresh your memory of the game, you will find it on the web site for the show,
        http://www.cbs.com/primetime/survivor5/show/episode06/s5story.shtml .
Click on the button labeled "More Action at the Immunity Challenge" .

Tribe	Number of flags before move	Number of flags the tribe actually took	Number of flags the tribe should have taken
Sook Jai	21	2	
Chuay Gahn	19	2	
Sook Jai	17	2	
Chuay Gahn	15	1	
Sook Jai	14	1	
Chuay Gahn	13	1	
Sook Jai	12	1	
Chuay Gahn	11	2	
Sook Jai	9	3	
Chuay Gahn	6	2	
Sook Jai	4	3	
Chuay Gahn	1	1	

Question 2 (30 points)

Games of Strategy, Chapter 3, Exercises 2 and 3, p. 79.

In the trees for parts (b) of Exercise 2, player A gets to move at three nodes, and at each he has actions labeled N and S. For clarity, it would be better if you used different labels for the actions at different nodes. For example, you could label the first of these nodes 1, and call the actions there N1 and S1. Then the node where B moves could be 2, that where C moves could be 3, and the later nodes where A moves 4 and 5 respectively, with actions N4, S4 at 4 and N5, S5 at 5. Use similar terminology to distinguish the nodes and actions in Exercise 3.

Question 3 (25 points)

Games of Strategy, Chapter 3, Exercise 9, p. 81.

Question 4 (30 points)

Games of Strategy, Chapter 4, Exercises 2 and 3, pp. 114-5.