

**Statistics 473: Game Theory**  
Problem Set 12

**Due: Thursday May 2:**

From the text do problems: 429.1, 431.1,

1) For each of the strategies  $\sigma$  in problem 428.1, decide for which values of the discount factor  $\delta$ , if any, there is a Nash equilibrium where both players play  $\sigma$ .

2) Consider the following game.

	A	B	C
A	6,6	-1,7	-2,8
B	7,1	4,4	-1,5
C	8,-2	5,-1	0,0

a) Let  $\sigma$  be the strategy: start by playing B and as long as your opponent plays B continue to play B. If the opponent ever plays something other than B play C and continue to play C. For what values of  $\delta$  is there an equilibrium where both players play  $\sigma$ ?

b) Let  $\tau$  be the strategy: start by playing A and as long as your opponent plays A continue to play A. If the opponent ever plays something other than A play C and continue to play C. For what values of  $\delta$  is there an equilibrium where both players play  $\tau$ ?