

*PROBLEM SET THREE--MBA 5110*

- 1) In Table 1, is there a DS  $\underline{e}$  in the game? If not, are there any Nash  $\underline{e}$ ? If there are more than one Nash  $\underline{e}$ , how can the game have a solution?
- 2) In Table 2, is there a DS  $\underline{e}$ ? How might they play if the game is repeated?
- 3) Find the mixing probabilities for Carmine (probability =  $p$  of choosing *top*) & Miranda (probability =  $q$  of choosing *left*) in Table 3.
- 4) Find the sub-game perfect Nash equilibrium in Figure 1. If Jane has a strategy to always choose “small,” & Sam knows Jane’s strategy, what is the Nash  $\underline{e}$  that would occur, and is it SGP?

Table 1		<u>Betty</u>	
		Left	Right
<u>Abe</u>	Top	6, 3	3, 2
	Bottom	4, 7	5, 8

Table 2		<u>Zeke</u>	
		Deny	Confess
<u>Babe</u>	Deny	-1,-1	-10, 0
	Confess	0,-10	-8,-8

Table 3		Miranda	
		Left	Right
Carmine	Top	100,-100	150,-150
	Bottom	200,-200	50,-50

Fig.1

The 1st # in parentheses is Sam's payoff.

