Game Theory Day 5
Homework
Please complete on a separate piece of paper.

1. Determine the saddle points in the following game using the minimax and maximin method.

Rose\Colin	A	B	C	D
A	3	2	4	2
B	2	1	3	0
C	2	2	2	2

2. For the following game, if Colin is to play the mixed strategy ¼ A, ¾ B, what would Rose's expected value be? Then determine Colin's best mixed strategy.

Rose\Colin	A	B
A	-3	5
B	2	-2

3. Same directions as 1 but for the following 3 x 3 game.

Rose\Colin	A	B	C
A	3	0	1
B	-1	2	2
C	1	0	-1

4. Consider a basic game of Rock-Paper-Scissors between player A and B.
    a. What are the strategies for each player?
    b. What are the possible outcomes?
    c. This is a zero-sum game. Why?
    d. Write a Rock-Paper-Scissor Game with player A's payoffs in matrix game form.
    e. Write the game in strategic form.
    f. Write the game in extensive form.
    g. Is there a dominant strategy?
    h. Think! What factors would contribute to the probability of the other player picking a strategy?
    i. Suppose player 2 is just as likely to choose rock, paper, or scissors. What strategy would you use? Thoughts.