Due: Thursday February 11

From the Text: Do problems: 7.6–7.8

1) Watch the following excerpt from the film *A Beautiful Mind*, the Academy
Award winning film about the life of John Nash.

https://www.youtube.com/watch?v=CemLiSI5ox8

Consider the (admittedly sexist) strategic game where 4 men meet 5 women,
one blonde and four brunettes, in a bar. Each man must decide to make a pass
at the blonde or any of the brunettes. Each man prefers the blonde to the
brunettes and prefers the brunettes to failure. If more than one man makes a
pass at the blonde everyone will fail. If at most one man makes a pass at the
blonde everyone will succeed.
  a) What are the pure strategy Nash equilibria?
  b) Did the screenwriters get this right?

2) Consider the two player strategic game with the following payoff matrix.

	L	R
T	3,2	0,-2
B	-1,1	1,3

Find all pure and mixed strategy Nash equilibria.

*For Problems 3 and 4 recall that in IESDS you may eliminate strategies that
are dominated by mixed strategies as well as pure strategies.*

3) Consider the two player strategic game with the following payoff matrix.

	L	M	R
A	4,3	-1, 2	0, 4
B	2,0	3, 2	1, -1
C	-1,4	0,4	2,2
D	0, -1	2, 1	3,2

  a) Which strategy profiles survive IESDS?
  b) Find all pure and mixed strategy Nash equilibria.

4) Consider the game

	L	C	R
T	3,-1	4,-1	0,2
M	2,2	0,0	1,1
B	1,3	3,1	4,2

a) Do IESDS to simplify the game. b) FInd all pure and mixed strategy Nash equlibria.