Stat/Econ 473 Game Theory
Problem Set 7

Due: Tuesday March 12 :

From the Text: Do problems: 9-4, 9-9, 9-15

1) Find all pure and mixed strategy Nash equilibria. (Recall that in IDSDS we can eliminate strategies that are strictly dominated by a mixed strategy.)

	L	M	R
T	4,2	3,0	0,5
M	7,1	1,1	1,2
B	2,2	1,3	2,1

2) Consider a version of the Stackelberg Duopoly where Firms 1 and 2 have different cost functions. Assume that Firm 1 begins by deciding q_1 and then Firm 2, knowing q_1, chooses q_2. Assume the inverse demand function $p = 1000 - Q$ (i.e. the price per unit is $1000 - (q_1 + q_2)$), the cost function for Firm 1 is $c_1(q_1) = 3q_1$ and the cost function for Firm 2 is $c_2(q_2) = 2q_2$.

Find the subgame perfect equilibrium.