Economics 316

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Problems for Tutorial 6

1. Consider the Traveler's Dilemma, discussed in the second class.
   (a) Is any action of either player strictly dominated?
   (b) Modify the payoff function: instead of i's payoff being $a_j - 2$ if $a_i > a_j$ ($i = 1, 2$), suppose that it is $a_j - 1 - 0.01(a_i - a_j)$ if $a_i > a_j$ ($i = 1, 2$). Is any action of either player strictly dominated in this modified game?

2. For the following game,
   (a) find an action that is strictly dominated by a mixed strategy.
   (b) find all the mixed strategy Nash equilibria.

	L	R
T	$2, 3$	$2, 3$
M	$3, 1$	$0, 0$
B	$0, 0$	$7, 2$

3. [If time remains—otherwise this problem is an addition to Problem Set 6.] Consider a variant of the example of Bertrand's duopoly game with discrete prices in Problem 2 on Problem Set 2 where the total demand D is decreasing in price (but not necessarily linear) up to the price α, and $D(p) = 0$ for $p \geq \alpha$. Assume that $\alpha > c + 1$. Is the price $c + 1$ weakly dominated?