Statistics 473: Game Theory
Problem Set 9

Due: Thursday April 4:

From the text do problems: 282.1, 282.3, 287.1

1) Two players play a game of chicken. They drive toward each other in the middle of a street and just before impact simultaneously decide to continue (BOLD) or swerve (CHICKEN). If both players swerve they each receive a payout of 0. If one player is bold and the other chicken, the bold player gets a payoff of R and the chicken player gets a payoff of 0. If both are both players are bold, each is punished by their parents. The punishment will either be H if the parents are harsh or L if the parents are lenient (where $H > L$). Each driver knows if his own parents are harsh or lenient. Each player thinks there is a $1/2$ chance that the other player's parents are harsh. Set this up as a Bayesian game.

Determine the pure strategy Nash equilibria if $H = -10$, $R = 8$ and $L = -2$.