Name:_____

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PhD Group: _____

Version A

Microeconomics II

SDPE, Stockholm School of Economics

Fourth Assignment

"On Perfect Bayesian Equilibrium"

Section 1. The Court

1. There are two players, a plaintiff and a defendant in a civil suit. The plaintiff knows whether or not he will win the case if it goes to trial, but the defendant does not have this information. The defendant has prior beliefs that there is a probability of 1/3 that the plaintiff will win. If the plaintiff wins, his payoff is 3 and the defendant's payoff is -4; if the plaintiff loses, his payoff is -1 and the defendant's is 0 (this corresponds to the defendant paying cash damages of 3 if the plaintiff wins, and the loser of the case paying court costs of 1). The plaintiff has two possible actions: ask for a low settlement of $m = 1$ or a high settlement of $m = 2$. If the defendant accepts a settlement offer of m, the plaintiff's payoff is m and the defendant's is $-m$. If the defendant rejects the settlement offer, the case goes to court. List all pure strategy PBE strategy profiles. For each such profile, specify the posterior beliefs of the defendant as a function of m, and verify that the combination of this beliefs and the profile is in fact a PBE.

   Hint: Similar to "Quiche or Beer?"