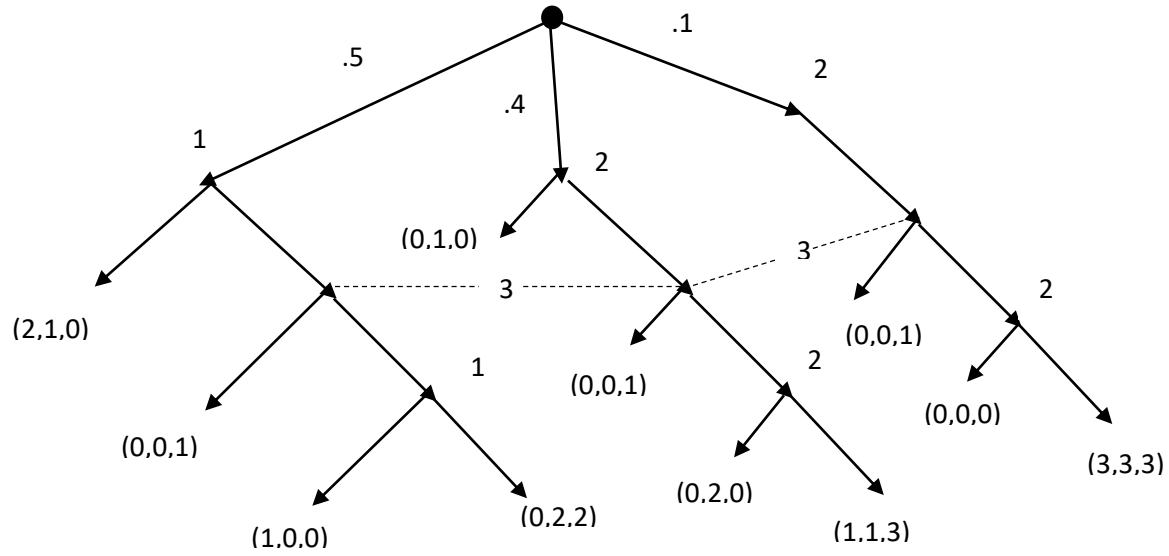
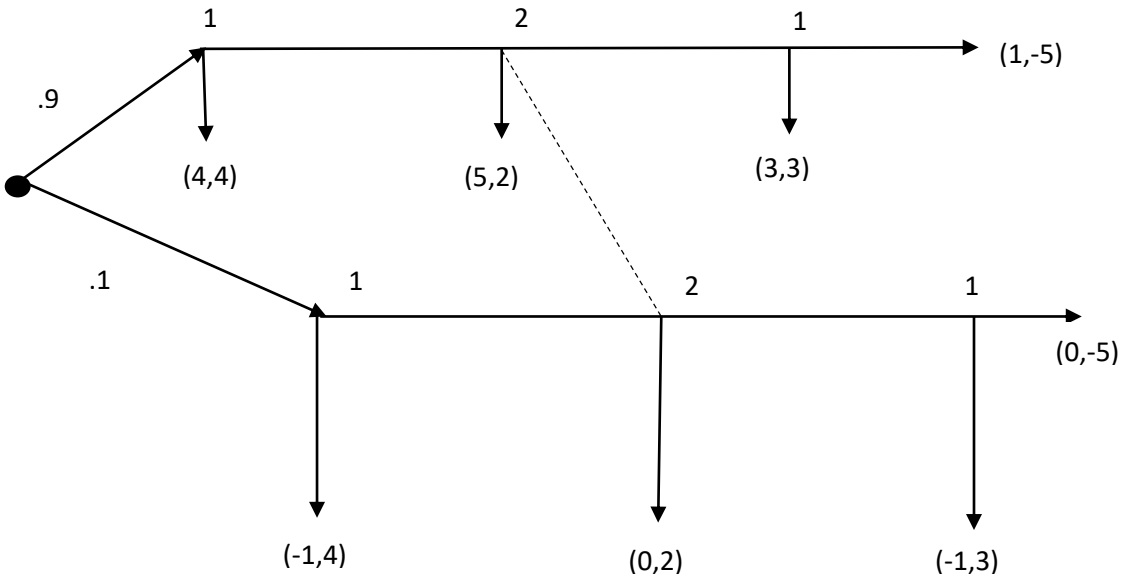
**Problem Set 5, Introduction to Game Theory (Part B), Winter Term 2017**

1. Find a perfect Bayesian Nash equilibrium in the following game.




2. Find the PBE




3. We have a Judge and a Plaintiff. The Plaintiff has been injured. Severity of the injury, denoted by $v$, is the Plaintiff's private information. The Judge does not know $v$ and believes that $v$ is uniformly distributed on {0, 1, 2, ..., 99} (so that the probability that $v = i$ is 1/100 for any $i \in${0,1,...,99}). The Plaintiff can verifiably reveal $v$ to the Judge without any cost, in which case

the Judge will know. The order of the events is as follows. First, the Plaintiff decides whether to reveal $v$ or not. Then, the Judge rewards a compensation $R$. The payoff of the Plaintiff is $R - v$, and the payoff of the Judge is $-(v - R)^2$. Everything described so far is common knowledge. Find a perfect Bayesian Nash equilibrium.

4. Find PBE