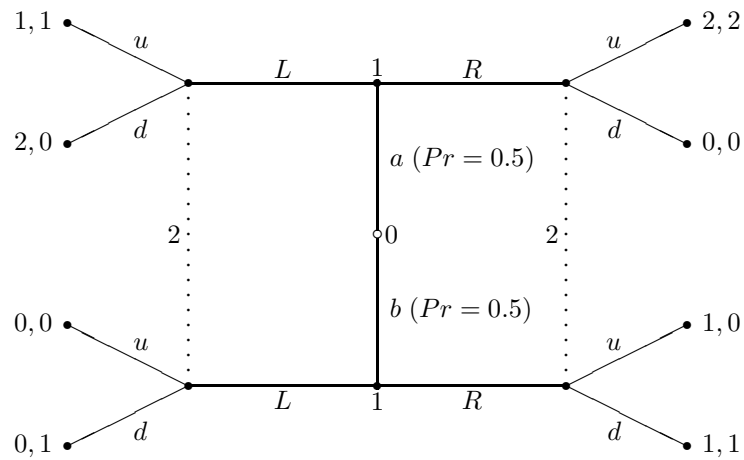


Microeconomic Theory II

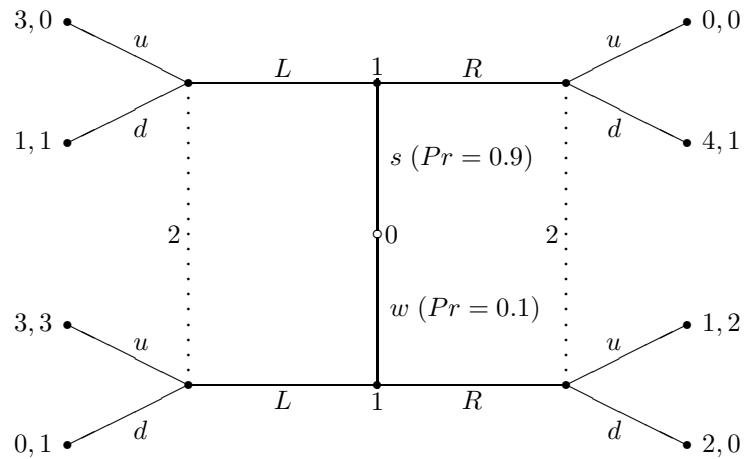
Problem Set 5

This problem set focuses on signaling models and perfect Bayesian equilibria.

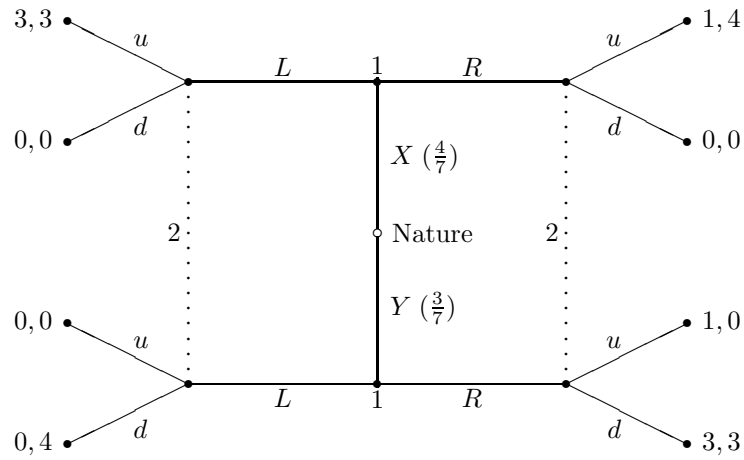
1. Find all pure-strategy Perfect Bayesian equilibria of the game below (i.e., check both possible pooling outcomes and both possible separating outcomes).



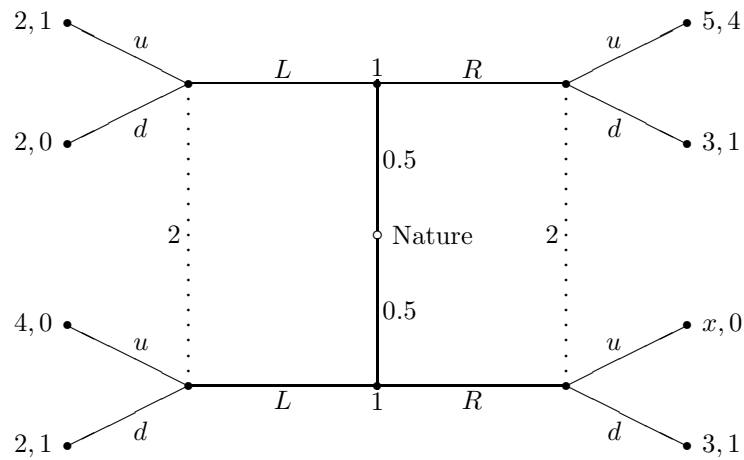
2. Find all pure-strategy Perfect Bayesian equilibria of the game below.



3. Find all pure-strategy perfect Bayesian equilibria of the game below and determine which satisfy the intuitive criterion



4. For what values of x does the following game have a separating equilibrium?



5. Consider the education signaling model considered in class (or in MWG 13.C). There are two types of workers, $t_L = 1$ and $t_H = 4$, where t_i is the worker's productivity. Workers can acquire education before entering the labor market, but the education does not change a worker's productivity. The cost of education is given by $c(e, t) = \frac{e^2}{3t_i}$. A worker's utility is given by $w - c(e, t)$, and wages are set equal to the expected productivity.
- (a) What are the lowest and highest possible levels of education chosen by the high types in a separating equilibrium?
 - (b) Let the proportion of high types be given by p . For what p are high types better off under a separating equilibrium than in an environment where schooling is not available?