

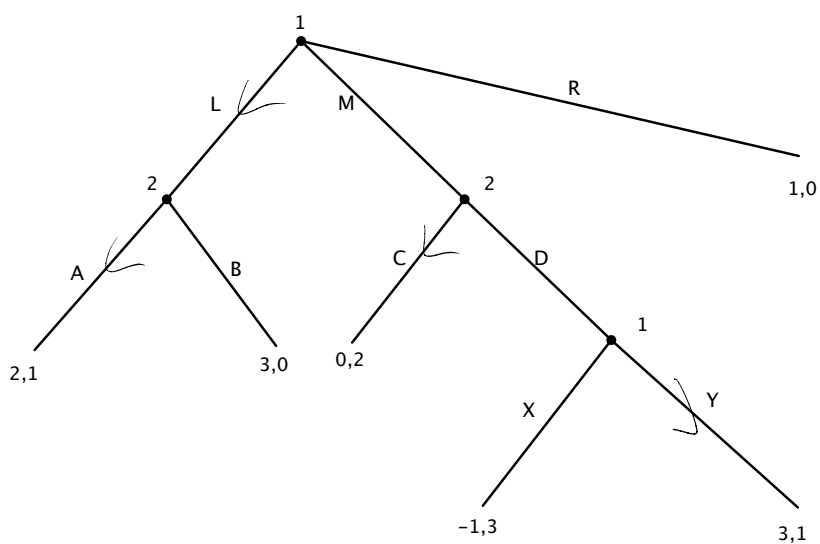
Activity: Finding Subgame Perfect Equilibria

Econ 305

Brandon Lehr

Find all of the subgame perfect equilibria of the following games:

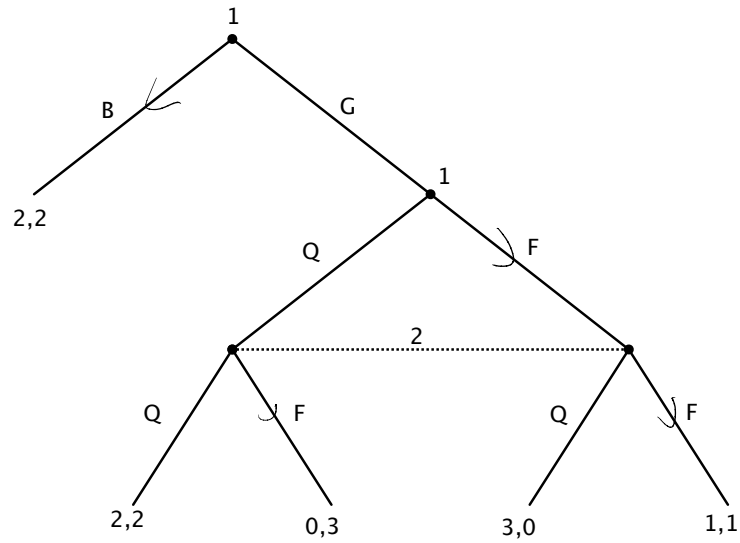
1 Game 1



(L, X, AC) is a subgame perfect equilibrium

2 Game 2

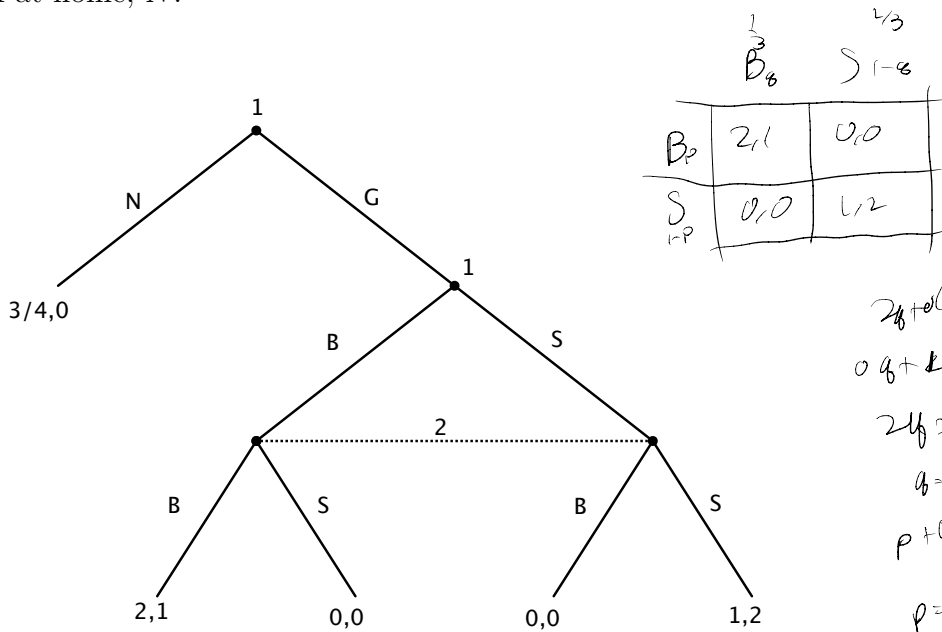
Consider this alternative version of the Prisoner's Dilemma where player 1 first decides whether or not to play the Prisoner's Dilemma game, G , or go to the beach B



(BF, F) is a subgame perfect equilibrium

3 Game 3

Consider this alternative version of simultaneous “Bach or Stravinsky” where player 1 first decides whether or not to play this coordination game, G , or cancel the concert in favor of watching Netflix at home, N .



$$\begin{aligned}
 2p + 0(1-p) &= \\
 0q + 1(1-q) &= \\
 2p &= 1-q \\
 q &= \frac{1}{3} \\
 p + 0(1-p) &= 0p + 2(1-p) \\
 p &= \frac{2}{3}
 \end{aligned}$$

$$\left(N \left(\frac{2}{3} B + \frac{1}{3} S \right), \frac{1}{3} B + \frac{2}{3} S \right)$$

$$(G B, B)$$

$$(G S, S)$$

are subgame perfect equilibria