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Answers to Problem Set 2: More Static Game Theory

April 22, 2002

1. Nash Equilibrium

	L	R
U	10*,5*(not efficient)	11,0
D	5,3	12*,5*(efficient)

b)

	L	R
U	3,1	2*,9*(efficient)
D	7*,-1*(efficient)	1,-3

2. Duopoly

$\pi_i = (x_i - \bar{x}_{-i}) - c\left(x_i - \gamma\bar{x}_{-i}\right)^2 / 2$

$1 - c(x_i - \gamma\bar{x}_{-i}) = 0$

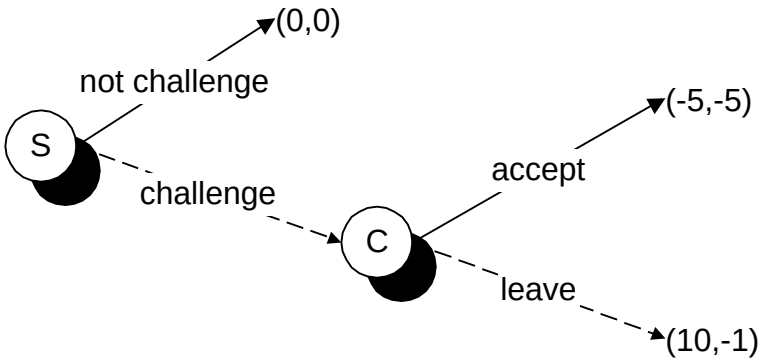
$x_i = \gamma\bar{x}_{-i} + 1/c$

$x_i = 1/(1-\gamma)c$

doesn't depend on the number of musicians

3.The Challenge

extensive form with subgame perfect choices marked with dashed lines



normal form with best response correspondence and Nash equilibria marked

	accept	leave
challenge	-5,-5	10*,-1*
not challenge	0*,0*	0,0