

Game Theory

Exercise Sheet 1

Date: April 24, 2015

Student: Tarek Saier

Exercise 1.1

(a)

$G = \langle N, (A_i), (u_i) \rangle$ with

$N = \{1, 2\}$

$A_1 = A_2 = \{u, l, m\}$ //Note: u =upper path, l =lower path
 m =path using vertical arrow in the middle

	u	l	m
u	2.2 , 2.2	1.7 , 1.7	2.2 , 1.6
l	1.7 , 1.7	2.2 , 2.2	2.2 , 1.6
m	1.6 , 2.2	1.6 , 2.2	2.1 , 2.1

sticktly dominated actions:

$$u_1(a_{-1}, m_1) > u_1(a_{-1}, l_1)$$

$$u_2(a_{-2}, m_2) > u_2(a_{-2}, l_2)$$

$$u_1(a_{-1}, m_1) > u_1(a_{-1}, u_1)$$

$$u_2(a_{-2}, m_2) > u_2(a_{-2}, u_2)$$

weakly dominated actions:

$$u_1(a_{-1}, m_1) \geq u_1(a_{-1}, l_1)$$

$$u_2(a_{-2}, m_2) \geq u_2(a_{-2}, l_2)$$

$$u_1(a_{-1}, m_1) \geq u_1(a_{-1}, u_1)$$

$$u_2(a_{-2}, m_2) \geq u_2(a_{-2}, u_2)$$

TODO: Nash equilibria

(b)