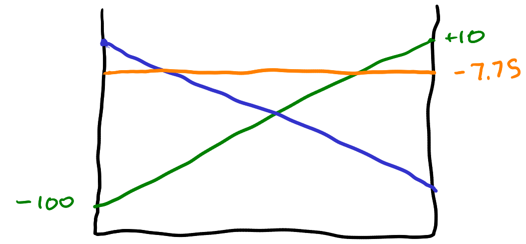
"Terminal Tiger POMDP"

Problem terminates on/after OL or OR

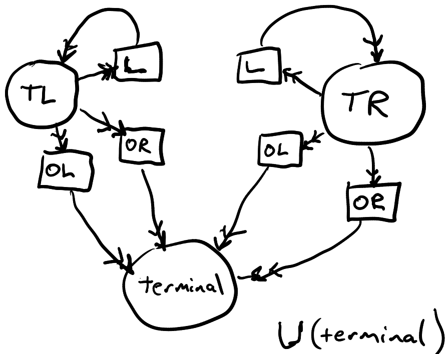
Infinite Horizon

for a terminal action $\underline{U^a(s) = R(s,a)}$



b(TR)

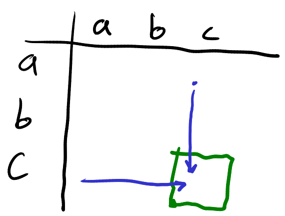
If you want to relate this to terminal states



$$U^{OL}(s) = R(s, OL) + \gamma U(\text{terminal})$$
$$= R(s, OL)$$

$U(\text{terminal}) \equiv 0$

Find pure Nash Equillibria:



(c,c) is the only pure Nash equilibrium.

$\boxed{\begin{matrix} \pi^1(c) = 0.3 & \pi^2(c) = 0.02 \\ \pi^1(b) = 0.7 & \pi^2(b) = 0.98 \end{matrix}}$ is a mixed N.E.

P1 has to be indifferent

Not the same as above →

$5\pi^2(b) + 6\pi^2(c) = u$ ← payoff for P1 playing x

$3\pi^2(b) + 1\pi^2(c) = u$ ← payoff for P1 playing y

$\pi^2(b) + \pi^2(c) = 1$

	b	c
x	5, ?	6, ?
y	3, ?	1, ?

	S	T
S	1, 1	3, 0
T	0, 3	2, 2

P1 indifferent

P1: S

$$1\pi^2(S) + 3\pi^2(T) = u$$

$$0\pi^2(S) + 2\pi^2(T) = u$$

$$\pi^2(S) + \pi^2(T) = 1$$

$$\pi^2(S) + \pi^2(T) = 0$$

$$\pi^2(S) + \pi^2(T) = 1$$