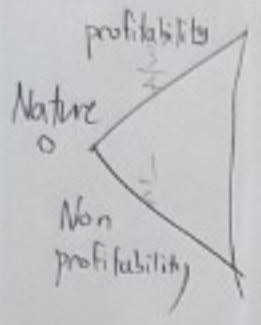
9. (a)



(b)

First let's

Bank's be

$P(t_p|t$

then let's

i) Picks

$E(U_b(L,S$

ii) Picks

$E(U_b(NL,S_1$

How abou

Firm's beli

And he

i) type

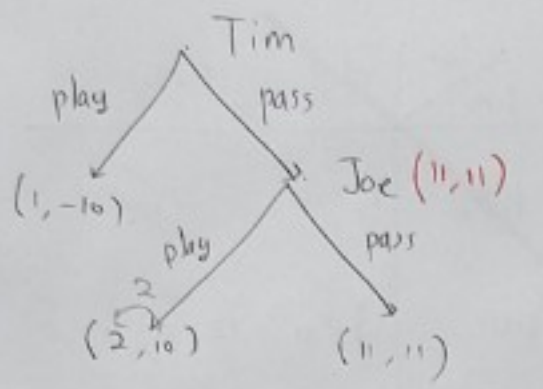
① pick

$E(U_F(T,S$

② pick

$E(U_F(S,S_b$

(d) game change like this



Tim \ Joe	play	pass
play	1, -10 ✓	1, -10 ✓
pass	2, 10 ✓	11, 11 ✓ ✓

Nash equilibrium is (pass, pass)

SPNE also (pass, pass)

So NE changes.

8. $Q = 24 - P$

$Q = q_1 + q_2 + q_3$

F_1, F_2 simultaneously and F3 then follow.

So, first we could get F3's best response.

$\pi_3 : (24 - q_1 - q_2 - q_3) \cdot q_3 \Rightarrow 24q_3 - q_1q_3 - q_2q_3 - q_3^2$

$\Rightarrow 24 - q_1 - q_2 - 2q_3 = 0$

$\therefore q_3^* = \frac{24 - q_1 - q_2}{2}$

then get F_1, F_2's best response using q_3^*

$\pi_1 \Rightarrow$

$\left(24 - q_1 - q_2 - \left[\frac{24 - q_1 - q_2}{2}\right]\right) \cdot q_1$

$12q_1 - \frac{1}{2}q_1^2 - \frac{1}{2}q_1 \cdot q_2$

$12 - q_1 - \frac{1}{2}q_2 = 0$

$q_1^* = 12 - \frac{1}{2}q_2$

Same mechanism

$q_2^* = 12 - \frac{1}{2}q_1$

So, solve this equation,

$q_1^* = q_2^* = 8.$

then

$q_3^* = 4$