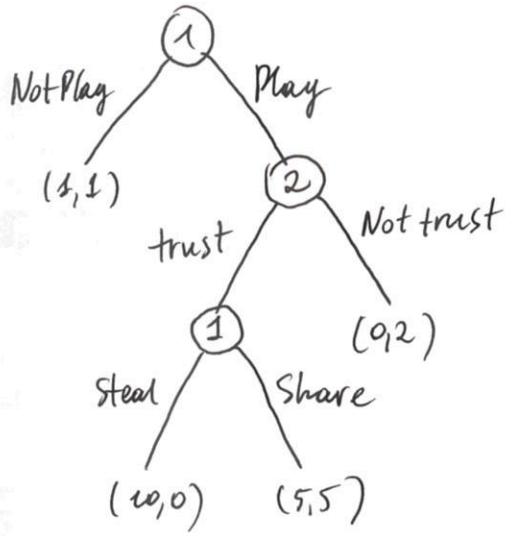
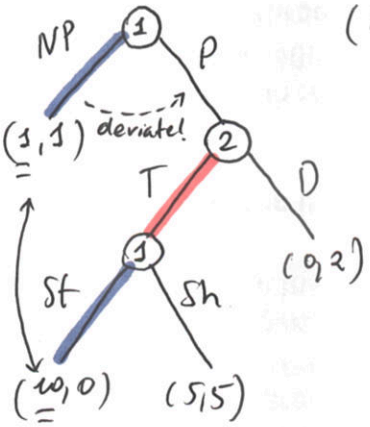
Question 2



What are pure strategy Nash Equilibria?

(c)

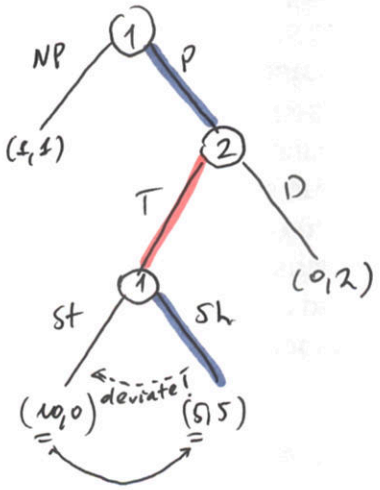


(Not play, Steal) (Trust)

not a NE because

player 1 would deviate and get 10 instead of 1

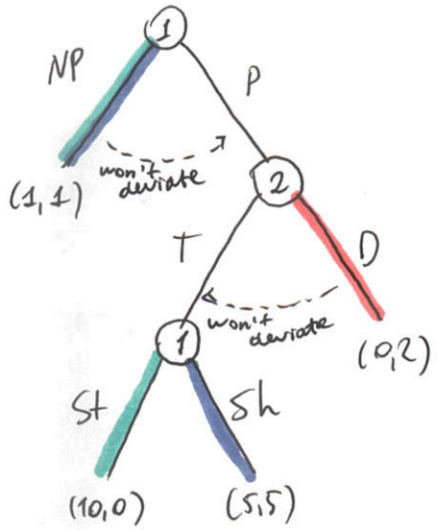
(e)



(Play, Share) (Trust)

not a NE because

player 1 would deviate and get 10 instead of 5



(Not Play, Share) (Distrust)
(Not Play, Steal) (Distrust) are Nash Equilibria

(no player wants to deviate)

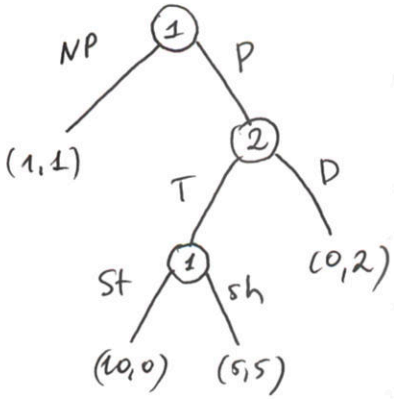
- if player 1 decides not to play,
  player 2 indifferent between T/D - his node isn't reached anyway

- if player 2 decides to distrust,
  player 1 prefers not to play and get 1 instead of 0.

- no one want to deviate

Question 3

Which is the Subgame Perfect Equilibrium?

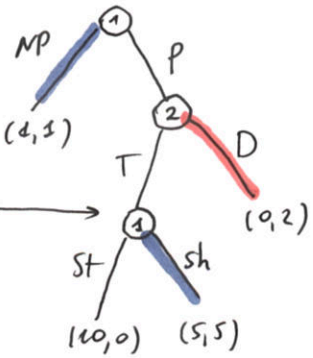


Subgame Perfect Equilibria – subset of the set of Nash Equilibria

NE: (NP, Sh), (D)
(NP, St), (D)

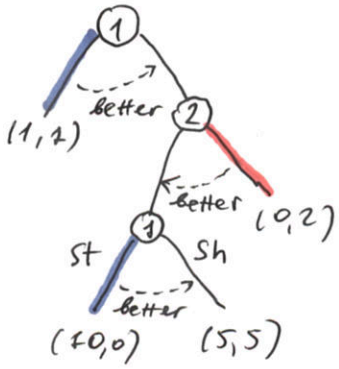
1. (NP, Sh), (D)

1's best response between Sh and St is to steal (10 vs 5), not SPNE



2. (NP, St) (D)

- if 2 plays T, 1 prefers to Steal
- therefore, 2 prefers to Distrust (2 better than 0)
- and player 1 prefers not play since 1 is better than 0

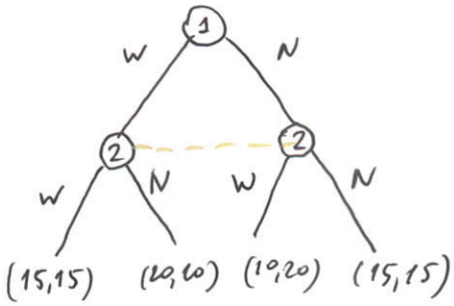


⇓

this is SPNE

Question 4

Subgame



which is a pure strategy Nash Equilibrium of the game?

1 \ 2	N	W
N	15,15	10,20
W	20,10	15,15

N for 1 is dominated by W
N for 2 is dominated by W

⇓

both will play W.

Question 6

① only D and E remained

D proposes 100, and one vote is enough,
Split is (100,0)

② C, D, E: C offers (99, 0, 1)

E in this case gets 1. If C walks the plan, E would get 0, so he votes

③ B, C, D, E B offers (99, 0, 1, 0)

D support, because otherwise he gets 0

④ A, B, C, D, E A offers (99, 0, 1, 0, 1)

C and E support him, because otherwise they get 0.