Assignment 3 : Game theory

1. Two people have 10€ to divide between themselves. They use the following procedure. Each person names a certain amount (a non negative integer), at most equal to 10€. If the sum of the amounts that the persons name is at most 10€, then each person receives the amount of money she named (and the remainder is destroyed). If the sum of the amounts that they name exceeds 10€ and the amounts named are different, then the person who named the smaller amount receives that amount and the other person receives the remaining money. If the sum of the amounts that the players named exceeds 10€ and the amounts are the same, then each person receives 5 €.

Write down this game as the strategic game (players, actions, payoff)

Determine the Nash equilibria using best response functions

2. Find the mixed strategy Nash equilibria in

	L	R
T	6,0	0,6
B	3,2	6,0

	L	R
T	0,1	0,2
B	2,2	0,1

2. Find the Nash equilibria and determine which of them is subgame perfect