Nash Equilibrium

Definition

The outcome $O(s) \in Z$ of strategy profile $s = (s_i)_{i \in N}$ is the terminal history such that for $0 \leq k < K$ we have $s_{P(a^1,\ldots,a^k)}(a^1, \ldots, a^k) = a^{k+1}$ where K is the length of $O(s)$.

Definition

A Nash equilibrium of an extensive game with perfect information $\{N, H, P, (\succeq_i)\}$ is a strategy profile s^* such that for every player $i \in N$ we have

$$O(s_i^*, s_{-i}^*) \succeq_i O(s_i, s_{-i}^*) \text{ for every strategy } s_i \text{ of player } i.$$