Action Profile:
"Cartesian Product" of two sets

$$A = A_1 \times A_2$$ — all pairs of elements (x, y) where the first element belongs to A_1 and the second to A_2.

$A_1 = \{1, 2\}$ $A_2 = \{1, 2\}$

$A = A_1 \times A_2 = \{(1,1), (1,2), (2,1), (2,2)\}$

Set of "action profiles"

Payoffs : $(u_1 : A \to \mathbb{R})$

"Function" Set

$\mathbb{R}$ ↑ Payoff (all real numbers)

Game

Strictly dominated if

$$\exists s_i' \, \forall s_{-i} \, (u_i(s_i', s_{-i}) > u_i(s_i, s_{-i}))$$

if different way around the NBR → never best response

NE (Nash equilibrium) if:

$\forall_i \forall_{s_i} (u(s_i, -) \geq u(s_i', -))$

PE (Pareto efficient) if:

Sequential Game