

Typesetting Game Theory

Ulle Endriss

Institute for Logic, Language and Computation
University of Amsterdam

January 6, 2020

Vectors and Cartesian Products

Use the `\boldsymbol`-command to typeset vectors and Cartesian products:

A *normal-form game* $\langle N, \mathbf{A}, \mathbf{u} \rangle$ consists of a set $N = \{1, \dots, n\}$ of *players* i , a set $\mathbf{A} = A_1 \times \dots \times A_n$ of *action profiles* $\mathbf{a} = (a_1, \dots, a_n)$, and a profile $\mathbf{u} = (u_1, \dots, u_n)$ of *utility functions* $u_i : \mathbf{A} \rightarrow \mathbb{R}$.

Matrix Representation of Normal-Form Games

Typesetting normal-form games (Prisoner's Dilemma and a generic example):

	C	D	
C	-10	0	
	-10	-25	
D	-25	-20	
	0	-20	

	L	R	
T	5	6	
	1	2	
B	7	8	
	3	4	

```
\nfgame{C D C D $-10$ $-25$ $0$ $-20$ $-10$ $0$ $-25$ $-20$}  
\nfgame{T B L R $1$ $2$ $3$ $4$ $5$ $6$ $7$ $8$}
```