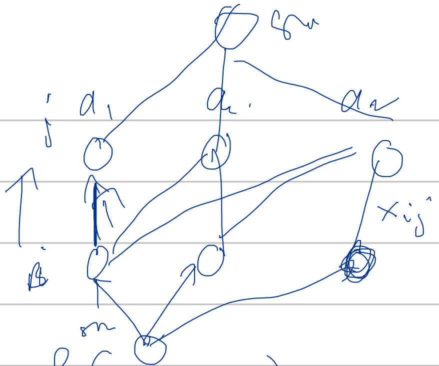


$n \Rightarrow n!$ (fixed) ✗

n

| sample < fair / not fair

$f(e_1, e_2) = p(e_1, e_2)$ [$t_1 =$, —]

Fixed: white 1vs 2: vs b

≠ order

$$\max_{k \in P(1-n)} \sum_{i=1}^{n} p(a_i, b_{k_i}) \quad \begin{bmatrix} 1 \\ 0.5 \\ 0 \end{bmatrix}$$

1) asm: $x_{ij} \in \{0, 1\}$

- supply: $\sum x_{kj} = 1$ for $k = 1 \to n$

dem $\sum x_{ik} = 1$ for $k = 1 \to n$

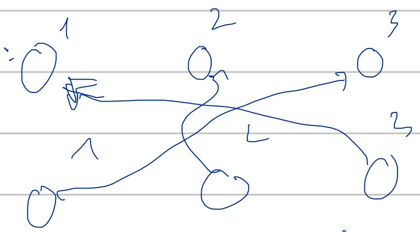
$$\max \sum_{i,j} x_{ij} \cdot p(i,j) \quad \begin{bmatrix} 1 \\ 0.5 \\ 0 \end{bmatrix}$$

prob ... of

$i \to j$ order

pry!

2) Order of round: fixed:



$p(i, j, \text{index} \% 2)$ $1 \to$ white, $2 \to$ black

fixed (order → color → white)

3) We don't know strategy! 1st chose the best {2nd →

A \ B	I	II	III
I	½	1	1
II	.	.	.
III		.	

$n \times n$

A 1 strategy: permutation: $\{1, 2, \ldots, n\}$, $\{1, \ldots, n\}$

B nash equilibrium

| 2 reverses |

p → A win / draw / B win | A more? B.

$A \subset B = 1$

Nash equilibrium opt

$\equiv$ A — B

Calculate

?.?

A \ B	I		
I	(,)	,	,
	,	,	,

p_1 } best for all

p_2

maxim = maxim

$\Rightarrow$ checking pure strategy has a SP

Nash equilibrium:

A:

$g_1 = p_1 \cdot b_{11} + p_2 \cdot b_{21} + \dots + p_n b_{n1}$

$g_n = \dots$

what of the p_i?

p_i higher.

For A: fixed $p_1, \dots, p_n \Rightarrow$

$$\max_p \min (g_1, \dots, g_n)$$

s.t. $0 \le p_i \le 1$

For B: fix $q_1, \dots, q_n$ ~

(3)