

# VALORE DI SHAPLEY

$$f_i = \frac{1}{N!} \sum_{P \in \mathcal{Q}} \Delta_i(S_i, P)$$

$\forall i \in N$   
 $\sum f_i = v(N)$

FS

$N = \{1, 2, 3\}$

$v(\{1, 2, 3\}) = 1$   
 $v(\{1, 2\}) = 1$   
 $v(\{1, 3\}) = 1$   
 $v(\{2, 3\}) = 0$   
 $v(\{i\}) = 0$

CORE

$\emptyset$	1	2	3
$R_1$	1	3	2
$R_2$	2	1	3
$R_3$	3	1	2
$R_{12}$	2	3	1
$R_{13}$	3	2	1

$x_1 \ x_2 \ x_3$

$(1 \ 0 \ 0)$

$v(S) = \left( \frac{4}{6} \ \frac{1}{6} \ \frac{1}{6} \right)$

$v(\{i\}) = 0$   
 $v(\{1, 2\}) - v(\{2\}) = 1 - 0 = 1$   
 $v(\{1, 3\}) - v(\{3\}) = 1 - 0 = 1$   
 $v(\{1, 2, 3\}) - v(\{2, 3\}) = 1 - 0 = 1$   
 $v(\{1, 2, 3\}) - v(\{1, 3\}) = 1 - 0 = 1$

$f_1 = \frac{4}{6} = \frac{2}{3}$       $f_2 = \frac{1}{6}$       $f_3 = \frac{1}{6}$

Somma

$0 + 0 + 1 + 1 + 1$

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$n! = 6$

# ESEMPIO

GIOCO DELLA

MAGGIORANZA FISSATA

$N=4$  (PARTITI)

$w = (1, 1, 1, 2)$

SOMMA DEI VOTI DELLA  
COALIZIONE S

$$w(S) \geq 3$$

$$v(S) = \begin{cases} 1 \\ 0 \end{cases}$$

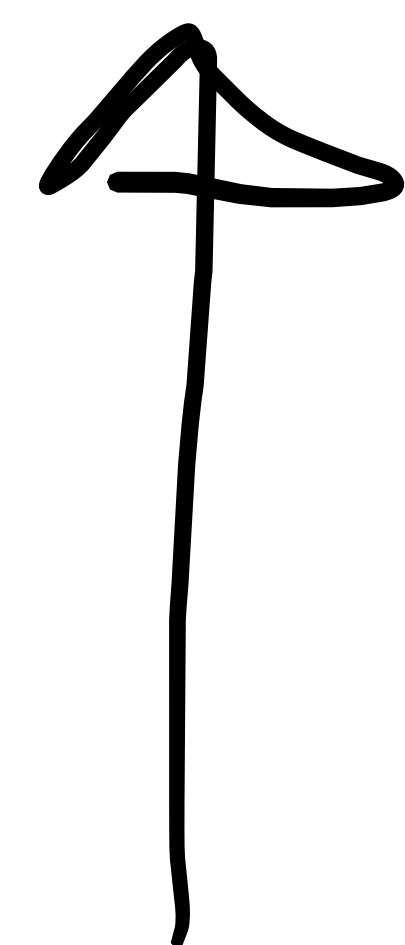
ALTRIMENTI

CORE?  
VUOTO

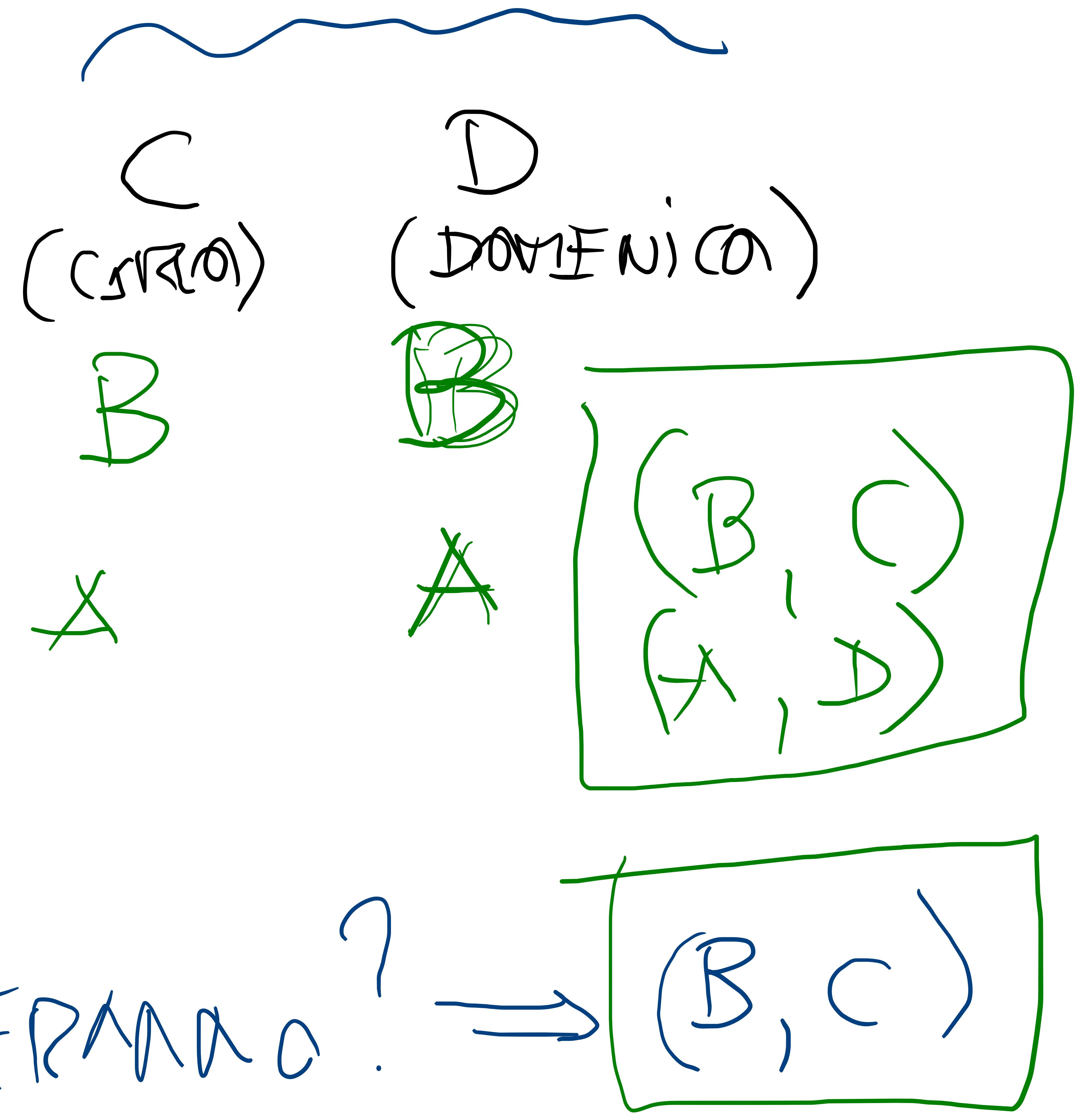
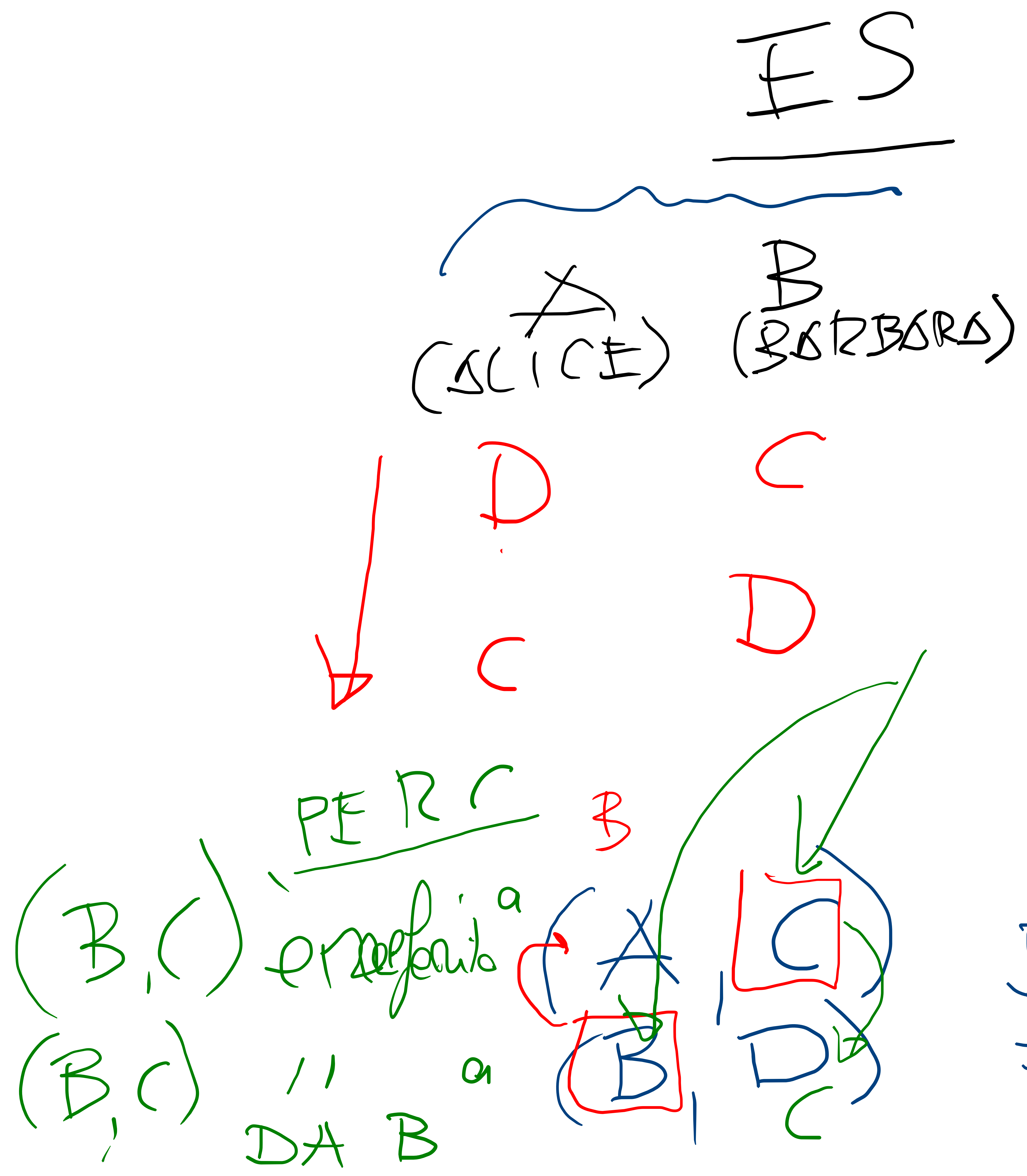
$$\begin{aligned} & \rightarrow x_1 + x_2 + x_3 + x_4 = 1 = v(N) \Rightarrow x_4 = 0 \\ & \rightarrow x_1 + x_2 + x_3 = 1 = v(1, 2, 3) \Rightarrow x_4 = 0 \\ & \rightarrow x_1 + x_2 + x_4 = 1 = v(1, 2, 4) \Rightarrow x_3 = 0 \\ & \rightarrow x_1 + x_3 + x_4 = 1 = v(1, 3, 4) \Rightarrow x_2 = 0 \\ & \rightarrow x_2 + x_3 + x_4 = 1 = v(2, 3, 4) \Rightarrow x_1 = 0 \end{aligned}$$

$$\text{V.S.} \left( \frac{1}{6}, \frac{1}{6}, \frac{1}{6}, \frac{1}{2} \right)$$

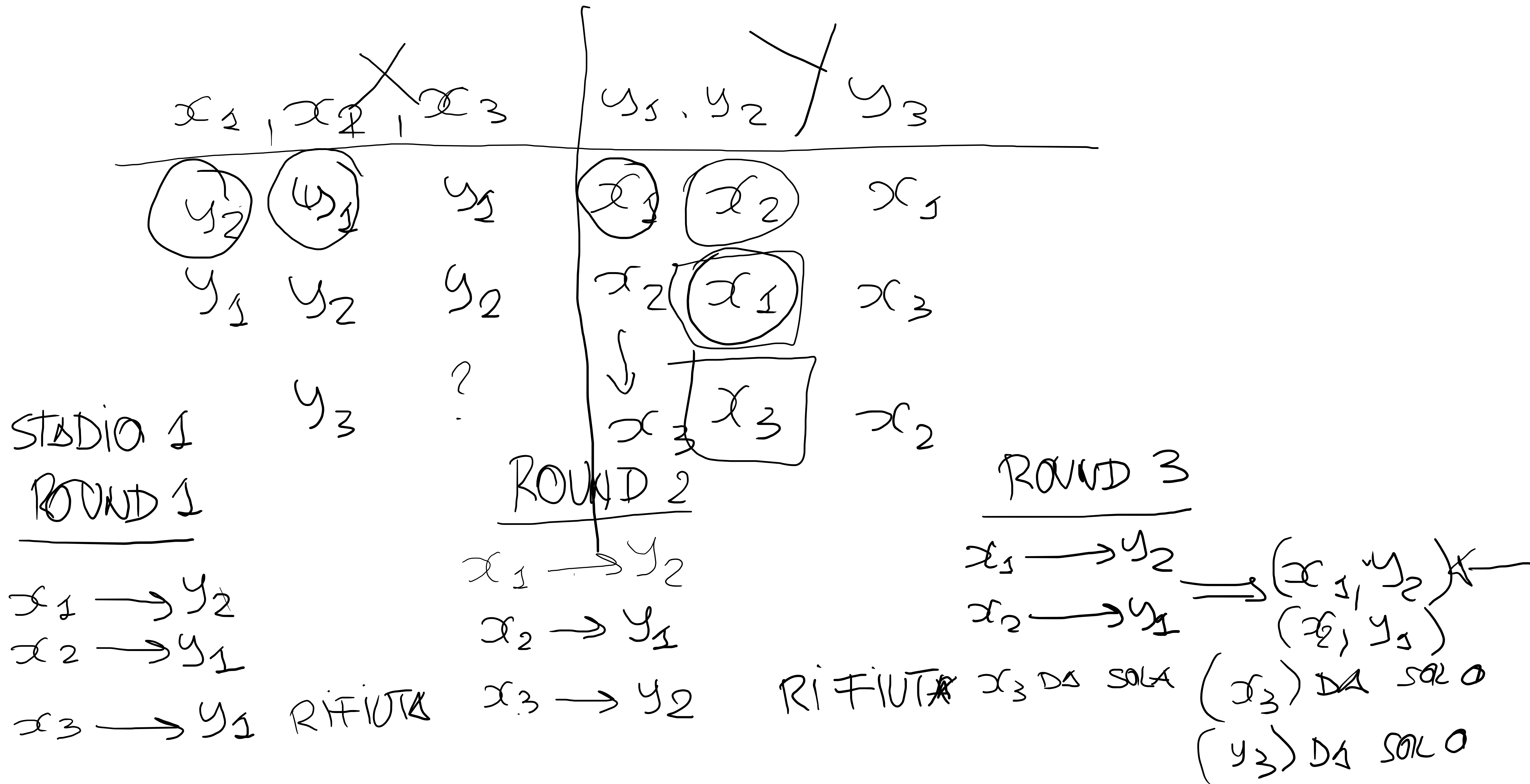
VERIFICARE



# GIOCHI DI ACCOCCIAMENTO<sup>u</sup> MATCHING GAMES



# ACCETTAZIONE DIFFERITA (SHIRPLEY)



$x_1$	$x_2$	$x_3$	$y_1$	$y_2$	$y_3$
$y_1$	$y_3$	$y_2$	$x_1$	$x_2$	$x_3$
$y_2$	$y_1$	$y_3$	$x_2$	$x_1$	$x_2$
$y_3$	$y_2$	$y_1$	$x_3$	$x_3$	$x_1$