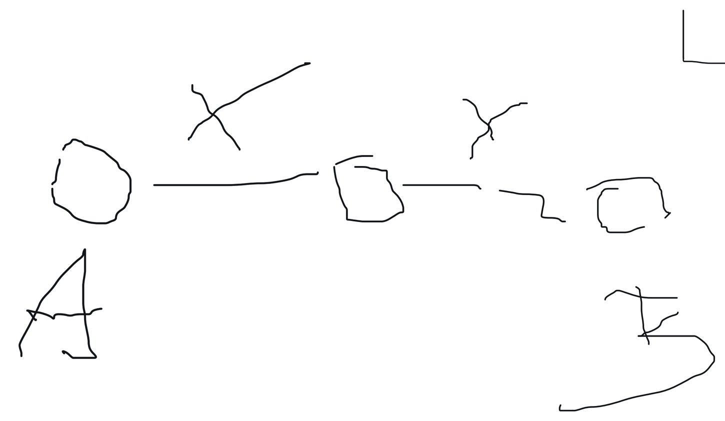
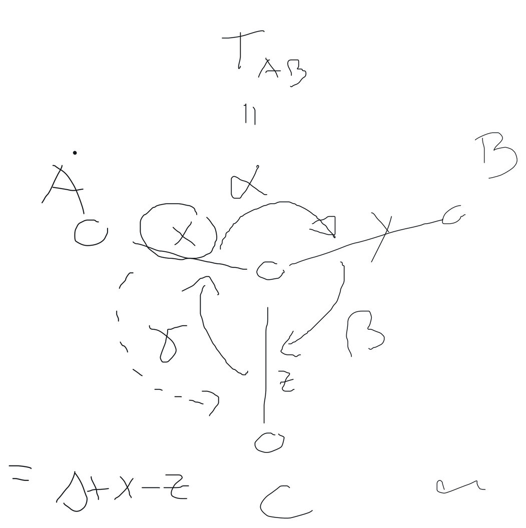
$y - x \le D_{AB}$

$x - y + \Delta \le D_{BA}$

$y - x \ge \Delta - D_{BA}$





$\alpha \le D_{AB}$

$\beta \le D_{BC}$

$x < y < z$

$\gamma = \alpha + \beta$

$= y - x + z - y$

$\gamma = z - x + \Delta$

$\alpha = y - x$ $\beta = z - y$ $\gamma = \Delta + x - z$

$\le -\alpha - \beta \le$

$z' \in \mathbb{Z}$ $z' \le \Delta$

$z' = z_{xy} \cdot \Delta$ $z' \in [0, \Delta]$

$y - x + z \cdot \Delta \le D_{AB}$

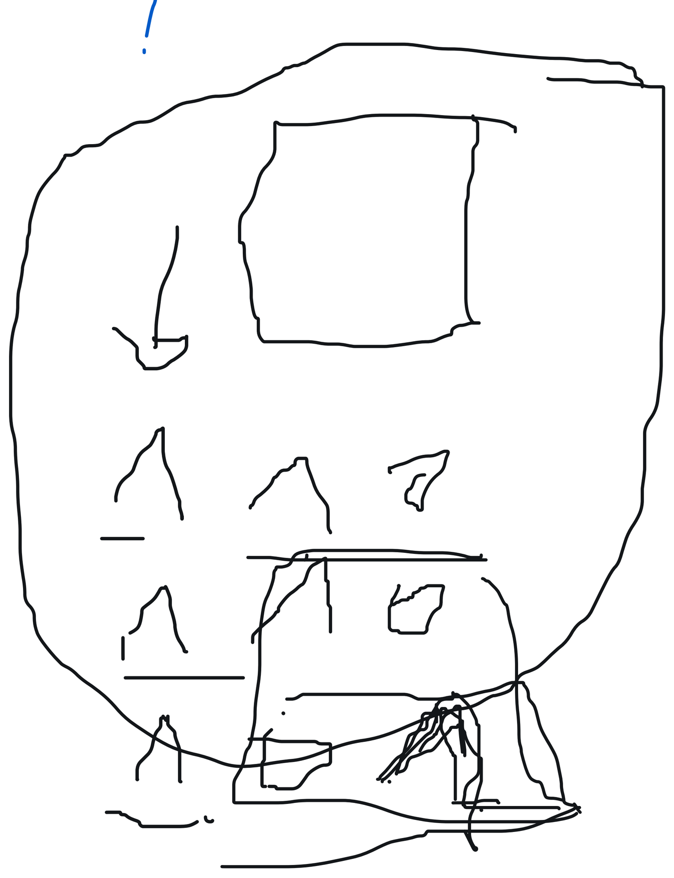
$x - y + (1-z)\Delta \le D_{BA}$

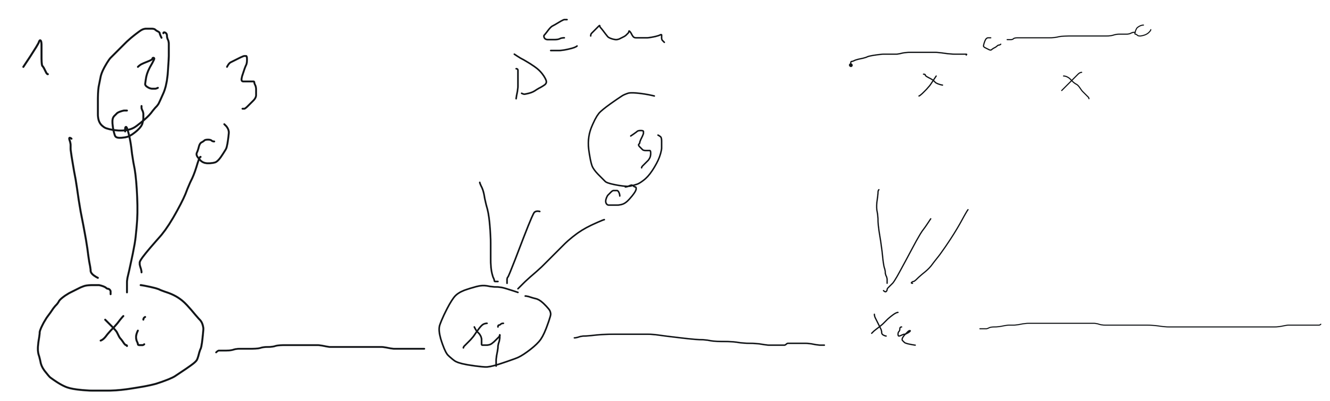
$\Delta + 1$

1) easy deg $\le \Delta$ $\rightarrow$ $\forall$ lab. different

$Ax \le b$

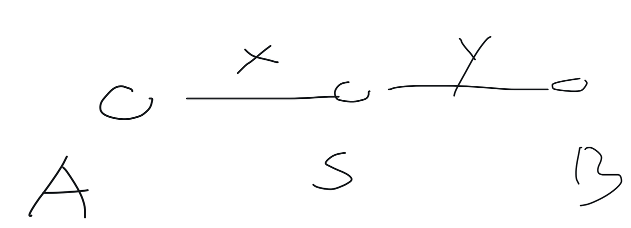
$0 \le z_{xy} \le 1$





$C_i = (x_i \vee x_j \vee x_k)$

$2 - 2 = 0$



$1 \cdot 2 \quad -1 \cdot 2$

$A = \begin{bmatrix} r_1 \\ r_2 \end{bmatrix}$

$r = 1 \cdot r_2$

- $D_{AB} \le \Delta$, $D_{BA} \le \Delta \Rightarrow$ Cramer's

$x - y + z_{xy} \cdot \Delta \le D_{BA}$

$y - x + (1 - z_{xy})\Delta \le D_{AB}$

$t = [x, y, z_{xy} \cdot \Delta]$

$t = [x, y, z_{xy} \cdot \Delta]$

$A = \begin{bmatrix} 1 & -1 & 1 \\ -1 & 1 & -1 \end{bmatrix} \sim 0$

- $D_{AB} \le \Delta$, $D_{BA} = \Delta + 1 \Rightarrow$ $x \ne y$

$z, z' \in \{0,1\}$

- $D_{AB} = D_{BA} = \Delta + 1 \rightarrow$ x can be $= y$

$x - y + z \cdot \Delta \le D_{BA}$

$y - x + z' \cdot \Delta \le D_{AB}$

$At^T = 1 \cdot x - 1 \cdot y + 1 \cdot z_{xy} \cdot \Delta$