

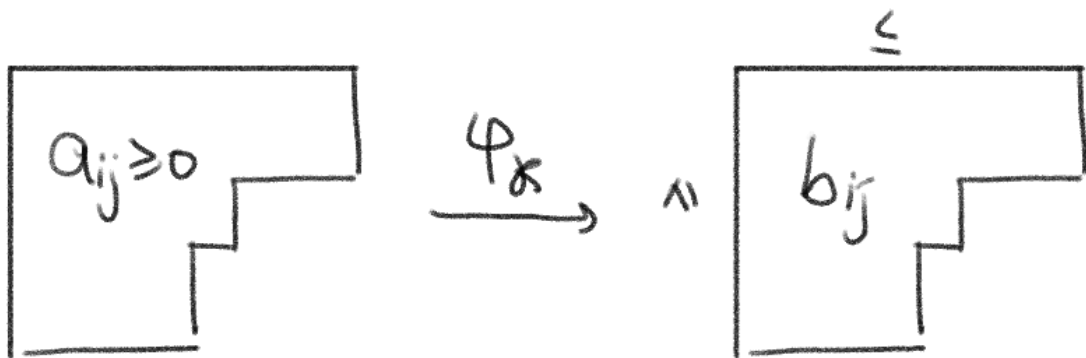
Hook Length Formula

$$f^\lambda = \# \text{SIT of shape } \lambda$$

Thm (Frame-Robinson-Threll) $N = |\lambda|$
 h_{ij} are hook lengths

$$f^\lambda = \frac{N!}{\prod_{(i,j) \in \lambda} h_{ij}}$$

The RSK map φ_K we constructed



φ_K is piecewise linear and volume preserving

Lemma $\sum_{(i,j) \in \mathcal{R}} b_{ij} = \sum_{(i,j) \in \mathcal{S}} h_{ij} a_{ij}$