The Optimal Strategy for the Game Lucky Numbers

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1 Game Rules

In the game *Lucky Numbers*, wo to four players compete for

2 Formal Representation

For each player, we calculate the range of permissible numbers for each empty square. For example Each empty square $s_{ij}^{(k)}$ is assigned a number r_{ij}^{k} representing the number of distinct cards that are allowed at in that position. These numbers form the set $R^{(k)}$. Moreover, define $b^{(k)}$ as the number of blank squares remaining on the board.

For each turn, we can define a full vector $\mathbf{v}^{(k)}$ of indicators, as follows:

Indicator	Description
v_1	change in number of empty spots (0 or 1)
v_2	change in minimum $r_{ij}^{(k)}$
v_3	change in maximum $r_{ij}^{(k)}$
v_4	change in mean $r_{ij}^{(k)}$
v_5	change in median $r_{ij}^{(k)}$
v_6	
v_7	

3 Results

4 Discussion