

MIP for Fm | prmu | Cmax

$$\min \left(\sum_{i=1}^{m-1} \sum_{j=1}^n x_{j1} p_{ij} \right) + \sum_{j=1}^{n-1} l_{mj}$$

subject to

$$\sum_{j=1}^n x_{jk} = 1 \quad k = 1, \dots, n$$

$$\sum_{k=1}^n x_{jk} = 1 \quad j = 1, \dots, n$$

$$l_{ik} + \sum_{j=1}^n x_{j,k+1} p_{ij} + w_{i,k+1} - w_{ik} - \sum_{j=1}^n x_{jk} p_{i+1,j} - l_{i+1,k} = 0$$

for $k = 1, \dots, n-1; i = 1, \dots, m-1$

$$w_{i1} = 0 \quad i = 1, \dots, m-1 \quad x_{jk} \in \{0, 1\} \quad j = 1, \dots, n$$

$$l_{1k} = 0 \quad k = 1, \dots, n-1 \quad k = 1, \dots, m$$

$$w_{ik} \geq 0 \quad i = 1, \dots, m-1; k = 1, \dots, n$$

$$l_{ik} \geq 0 \quad i = 1, \dots, m; k = 1, \dots, n-1$$

Job	Machine Center 1	Machine Center 2
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A	5	6
B	16	5
C	8	2
D	9	17
E	4	6