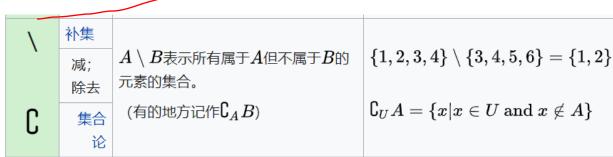
Full Solution: $N \leq 20$

Do dynamic programming on subsets. The DP state for a subset $S = \{c_1, c_2, \ldots, c_n\}$ of the cowphabet is $\min_p (\operatorname{evaluate}(p))$ over all n! permutations p of S. The DP transition for all nonempty S is as follows:

$$\mathtt{dp}[S] = \min_{c_j \in S} \left(\mathtt{dp}[S \setminus \{c_j\}] + \sum_{c_k \in S} (\# \ \mathrm{occurrences} \ \mathrm{of} \ c_j c_k)
ight)$$



0	1	2	3	4	5	6	7	8	9
m	i	1	d	r	e	d	r	e	e

$$occ[m\rightarrow m] \rightarrow occ[m][m] occ[20][20]$$

$$occ[m->m]=0$$
 $occ[d->m]=0$
 $occ[m->i]=1$ $occ[d->r]=2$
 $occ[m->l]=0$ $occ[d->e]=0$

0	1	2	3	4	5	6	7	8
m	i	1	d	r	е			

```
dp[m] =dp[000001]
dp[mi] =dp[00001]
...
dp[me] =dp[100001]
...
dp[dre] =dp[111000]
...
dp[mil] =dp[000111]
...
dp[mildre]=dp[111111]
ans
```

dp[0]=1表示不做任何组 合的时候答案是1

合的时候答案是1

. . .