

# Moser-de Bruijn Sequence

状态转移方程为：

$$\begin{aligned} dp[2i] &= 4 * dp[i] \\ dp[2i + 1] &= 4 * dp[i] + 1 \end{aligned}$$

```
#include <bits/stdc++.h>

using namespace std;
vector<int> dp;

void mbSequence(int N) {
    dp.resize(N);
    dp[0] = 0, dp[1] = 1;
    for (int i = 2; i < dp.size(); ++i) { i % 2 == 0 ? dp[i] = 4 * dp[i / 2] : dp[i] = 4 * dp[i / 2] + 1; }
}

int main() {
    mbSequence(100001);
    for (int i = 0; i < 10; ++i) i == 0 ? printf("%d", dp[i]) : printf(" %d", dp[i]);
    return 0;
}
```