```cpp
#include<bits/stdc++.h>
using namespace std;
#define INF 0x3f3f3f3f
#define maxn 2000
#define maxm 30000
#define rep(i, n, m) for (int i = n; i <= m; ++i)
#define per(i, n, m) for (int i = n; i >= m; --i)
#define ll long long
#define mod 1000000000 + 7
#define mian main
#define mem(a, b) memset(a, b, sizeof a)
#ifndef ONLINE_JUDGE
#define dbg(x) cout << #x << "=" << x << endl;
#else
#define dbg(x)
#endif
inline int read()
{
    int x = 0, f = 1;
    char ch = getchar();
    while (ch < '0' || ch > '9')
    {
        if (ch == '-')
            f = -1;
        ch = getchar();
    }
    while (ch >= '0' && ch <= '9')
    {
        x = 10 * x + ch - '0';
        ch = getchar();
    }
    return x * f;
}
inline ll readll()
{
    ll x = 0, f = 1;
    char ch = getchar();
    while (ch < '0' || ch > '9')
    {
        if (ch == '-')
            f = -1;
        ch = getchar();
    }
```

```c
    while (ch >= '0' && ch <= '9')
    {
        x = 10 * x + ch - '0';
        ch = getchar();
    }
    return x * f;
}
int gcd(int x,int y)
{
    return y?gcd(y,x%y):x;
}
```