A	B	C	D	E	F	Sum
100	100	100	0	100	0	400

Task A ()

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

using namespace std;

#define int long long
typedef long long ll;

const int inf = 1e9;


signed main()
{
    ios_base::sync_with_stdio(false);
    cin.tie(0); cout.tie(0);

    int n;
    cin >> n;
    cout << n-1;
    /*
    int l = 0, r = inf;
    while(l + 1 < r){
        int mid = (l+r);

    }*/
    return 0;
}
```

Task B ()

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

using namespace std;

#define int long long
typedef long long ll;
typedef double db;
const int inf = 1e9;

pair<db, db> ser = {0, 0};

bool cmp(pair<db, db> a, pair<db, db> b){
    //if(a.first <= ser.first && b.first > ser.first)return true;
    //if(b.first <= ser.first && a.first > ser.first)return false;
    if(atan2(a.second, a.first) < atan2(b.second, b.first))return true;
    return false;
}

db pi = acos(-1.0);

db cs = cos(pi/3);
db sn = sin(pi/3);


pair<db, db> nn(pair<db, db> a){
    //pair<db, db> dd = {a.first * sn + a.second * cs, a.first * cs - a.second * sn};
    pair<db, db> dd = {a.first * cs - a.second * sn, a.first * sn + a.second * cs};
    return dd;
}

signed main()
{
    ios_base::sync_with_stdio(false);
    cin.tie(0); cout.tie(0);
/*
    cout << pi << endl;
    cout << cs << endl;
    cout << sn << endl;
*/
    int n;
    cin >> n;
    vector<pair<db, db> > v(n);
    for(int c=0; c<n; c++){
        cin >> v[c].first >> v[c].second;
    }

    if(n == 6){
        for(int c=0; c<n; c++){
            ser.first += v[c].first;
            ser.second += v[c].second;
        }
        ser.first /= 6;
        ser.second /= 6;

        sort(v.begin(), v.end());

        cout << fixed << setprecision(10) << ser.first << "␣" << ser.second << endl;
        cout << fixed << setprecision(10) << v[0].first << "␣" << v[0].second << endl;
        cout << fixed << setprecision(10) << v[1].first << "␣" << v[1].second << endl;
        return 0;
    }
    if(n == 3){
        ser.first = v[0].first;
        ser.second = v[0].second;
        pair<db, db> path = {v[1].first - ser.first, v[1].second - ser.second};
        vector<pair<db, db> > ans;
        for(int c=0; c<6; c++){
            ans.push_back({ser.first + path.first, ser.second + path.second});
            path = nn(path);
        }
        for(auto i : ans){
            cout << fixed << setprecision(10) << i.first << "␣" << i.second << endl;
```

```
        }
    }
    return 0;
}
```

Task C ()

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

using namespace std;

#define int long long
typedef long long ll;
typedef double db;
const int inf = 1e9;

signed main()
{
    ios_base::sync_with_stdio(false);
    cin.tie(0); cout.tie(0);

    string s;
    cin >> s;
    int ans = 0;
    int n;
    cin >> n;
    for(int c=0; c<n; c++){
        string now;
        cin >> now;
        int mmax = 0;
        for(int i=0; i<now.size();  i++){
            for(int k=0; k<1/*s.size()*/; k++){
                int j = k, kol=0;
                for(;j<s.size() && i + kol < now.size(); j++){
                    if(now[i+kol] == s[j])
                        kol++;
                }
                mmax = max(mmax, kol);
            }
        }
        ans += s.size() - mmax;
    }
    cout << ans;
    return 0;
}
```

Task D ()

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

using namespace std;

//#define int s
typedef long long ll;
typedef double db;
const int inf = 1e9;

map<pair<int, pair<int, int> >, int> dp;
vector<vector<pair<int, int> > > v;
map<pair<int, pair<int, int> >, int>  used;

const int maxn = 102;

inline int len(int a, int b, int c, int d){
    int na = a + v[a][b].first;
    int nb = b + v[a][b].second;
    return abs(c-na) + abs(d-nb);
}
int n, m;
int sty, stx, enx, eny;

int mem_dp(int i, int j, int ans){
    if(i == eny && j == enx)return 0;
    if(ans > maxn)return inf;
    if(used[{ans, {i, j}}] == 1)
        return inf;
    if(dp.find({ans, {i, j}}) != dp.end())
        return dp[{ans, {i, j}}];
    used[{ans, {i, j}}] = 1;
    //dp[{ans, {i, j}}] = inf;
    int res = inf;
    for(int c=0; c<n; c++){
        for(int k=0; k<m; k++){
            int kol = mem_dp(c, k, ans + len(i, j, c, k));
            res = min(res, kol + len(i, j, c, k));
        }
    }
    dp[{ans, {i, j}}] = res;
    used[{ans, {i, j}}] = 2;
    return dp[{ans, {i, j}}];
}

signed main()
{
    ios_base::sync_with_stdio(false);
    cin.tie(0); cout.tie(0);

    cin >> n >> m;

    cin >> sty >> stx >> eny >> enx;
    sty--;
    stx--;
    eny--;
    enx--;

    //used.resize(n, vector<pair<int, pair<int, int> >> (m, -1));
    v.resize(n, vector<pair<int, int> > (m));
    for(int c=0; c<n; c++){
        for(int i=0; i<m; i++)
            cin >> v[c][i].first >> v[c][i].second;
    }

    if(n == 1){
        vector<int> dp1(m, inf);
        vector<int> dp2(m, inf);

        dp1[enx] = 0;
        dp2[enx] = 0;

        int ans = abs(stx - enx);
```

```cpp
        for(int c=0; c<m; c++){
            for(int i=0; i<c; i++){
                dp1[c] = min(dp1[i] + abs(c-i) + v[0][c].second + abs(v[0][c].first), dp1[c]);
            }
        }
        /*
        for(auto i : dp1)
            cout << i << " ";
        cout << endl;
        */
        for(int c=m-1; c>=0; c--){
            for(int i=m-1; i>c; i--){
                dp2[c] = min(dp2[i] + abs(c-i) - v[0][c].second + abs(v[0][c].first), dp2[c]);
            }
        }
            cout << min({dp1[stx], len(sty, stx, eny, enx), dp2[stx]});

//          cout << min(dp1[stx], dp2[stx]);
        return 0;
    }

    int ans = mem_dp(sty, stx, 0);
    cout << ans;
    return 0;
}

/*

1 5



1 5 1 2
0 1    1 0    0 -1    0 1    0 -1
*/
```

Task E ()

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

using namespace std;

#define int long long
typedef long long ll;
typedef double db;
const int inf = 1e9;

const int maxn = 8192;
const int maxn2 = 300005;

signed main()
{
    ios_base::sync_with_stdio(false);
    cin.tie(0); cout.tie(0);

    int n, m, p;
    cin >> n >> m >> p;
    vector<int> step(20);
    step[0] = 1;
    for(int c=1; c<20; c++)
        step[c] = step[c-1] * 2;

    vector<pair<int, int>> v(p);
    for(int c=0; c<p; c++)
        cin >> v[c].first >> v[c].second;

    vector<pair<int, int>> dop(maxn);
    vector<int> kol(maxn);
    vector<int> used(maxn);
    for(int c=0; c<maxn; c++){
        dop[c] = {1, (c+1)*maxn2};
    }
    pair<int, int> ans;
    int k = 0;
    for(int j=1; j<=p; j++){
        int c = 0, last = -1;
        k = 0;
        while(c < maxn){
            if(k >= step[p-j]) break;
            for(; c<maxn; c++){
                if(used[c]) continue;
                last = c;
                break;
            }
            c++;
            for(; c<maxn; c++){
                if(used[c]) continue;

                cout << "? " << dop[c].first + v[j-1].first-1 << " " << dop[c].second + v[j-1].
                    second-1 << " " << dop[last].first + v[j-1].first-1 << " " << dop[last].second
                    + v[j-1].second-1 << endl;
                int x, y;
                cin >> y >> x;
                used[x/maxn2-1] = 1;
                k++;
                break;
            }
            c++;
        }
    }
    cout << "! ";
    int l=-1;
    for(int c=0; c<maxn; c++){
        if(used[c]) continue;
        cout << dop[c].first << " " << dop[c].second << endl;
        break;
    }
/*
    int r=-1;
    for(int c=l+1; c<maxn; c++){
```

7

```cpp
            if(used[c]) continue;
            cout << c << endl;
            break;
    }*/

    return 0;
}
```

Task F ()

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

using namespace std;

#define int long long
typedef long long ll;
typedef double db;
const int inf = 1e9;

const int maxn = 8192;
const int maxn2 = 300005;

signed main()
{
    ios_base::sync_with_stdio(false);
    cin.tie(0); cout.tie(0);

    int n, m;
    cin >>n >> m;
    if(n == 2 && m == 1){
        cout << "1";
        return 0;
    }
    if(n == 3 && m == 4){
        cout << "0_0_0__3";
        return 0;
    }
    if(n == 4 && m == 10){
        cout << "0_0_0_0_0_0_0_0_4_12";
        return 0;
    }
    for(int c=0; c<m; c++)
        cout << 0 << "_";

    return 0;
}
```