A	B	C	D	E	F	Sum
100	0	100	40	100	0	340

Task A ()

```cpp
#include<iostream>
#include<vector>
#include<algorithm>

using namespace std;

int main(){
    ios_base::sync_with_stdio(false);
    cin.tie(0);
    cout.tie(0);
    int n;
    cin >> n;
// /*
    int ma = 0;

    while(true){
        int k = n - ma;
        int k2 = k / 2;
        ma += k2;
        if(k2 == 0){
            break;
        }
    }

    cout << ma;
// */
    return 0;
}
```

Task B ()

Task C ()

```cpp
#include<iostream>
#include<vector>
#include<algorithm>

using namespace std;

int main(){
    ios_base::sync_with_stdio(false);
    cin.tie(0);
    cout.tie(0);
    string s;
    cin >> s;
    int n;
    cin >> n;
    int su = 0;
    for(int i = 0; i < n; i++){
        string t;
        cin >> t;
        int an = s.size();
        for(int j = 0; j < t.size(); j++){
            int cu = 0;
            int in = j;
            for(int u = 0; u < s.size(); u++){
                if(in < t.size() && t[in] == s[u]){
                    in++;
                }
                else{
                    cu++;
                }
            }
            an = min(an, cu);
        }
        su += an;
    }
    cout << su;
    // */
    return 0;
}
```

Task D ()

```cpp
#include <iostream>
#include<vector>
#include<set>
#define ft first
#define sec second
#define sz(a) a.size()
using namespace std;
int main() {
    ios_base::sync_with_stdio(false);
    int n, m;
    cin >> n >>m;
    int x1, y1, x2, y2;
    cin >> x1 >> y1 >> x2 >> y2;
    x1--;
    y1--;
    x2--;
    y2--;
    vector<vector<pair<int, int>>> pol(n, vector<pair<int, int>>(m));
    for(int i=0; i < n; i++){
        for(int j = 0; j < m; j++){
            cin >> pol[i][j].ft >> pol[i][j].sec;
        }
    }
    set<pair<int, pair<int,int>>> S;
    S.insert({0, {x1, y1}});
    vector<vector<int>> dis(n, vector<int>(m, 1e9));
    dis[x1][y1] = 0;
    while(sz(S) > 0){
        pair<int, pair<int,int>> res= *S.begin();
        S.erase(S.begin());
        for(int i = 0; i< n; i++){
            for(int j = 0; j <m;j++){
                int vx = i - res.sec.ft - pol[res.sec.ft][res.sec.sec].ft;
                int vy = j - res.sec.sec - pol[res.sec.ft][res.sec.sec].sec;
                if(abs(vx) + abs(vy) + dis[res.sec.ft][res.sec.sec] < dis[i][j]){
                    S.erase({dis[i][j],{i, j}});
                    dis[i][j] = abs(vx) + abs(vy) + dis[res.sec.ft][res.sec.sec];
                    S.insert({dis[i][j],{i, j}});
                }
            }
        }
    }
    cout << dis[x2][y2];
    return 0;
}
```

Task E ()

```cpp
#include<iostream>
#include<vector>
#include<algorithm>
#include<string>
#include<set>
#include<map>
#define int long long
//#include<unordered_set>
//#include<unordered_map>
#define sz(a) (int)a.size()
#define ft first
#define sec second

using namespace std;
//int n, m, b;
int mod = 1e18;

int rand2(){
    //int b = (1 << 16);
    int a = 0;
    for(int i = 0; i < 4; i++){
        if(i == 3) {
            a = (a << 9);
        }
        else{
            a = (a << 15);
        }
        a += rand();
    }
    int f = rand() % 2;
    a = a % mod;
    if(a > 3000000){
        a -= 3000000;
    }
    if(f == 0){
        a = -a;
    }
    return a;

}

bool check(int x1, int y1, int x, int y, int n, int m){
    int x2 = x1 + n;
    int y2 = y1 + m;
    //cout << x1 << " " << y1 << endl;

    //cout << n << " " << x2 << " " << y2 << endl;
    x2--;
    y2--;
    //cout << n << " " << m << " " << x << " " << y << " " << x2 << " " << y2 << endl;
    return x >= x1 && x <= x2 && y >= y1 && y <= y2;
}

signed main(){
    //cout << rand2();
    //cout << (1 << 12);
    ios_base::sync_with_stdio(false);
    cin.tie(0);
    cout.tie(0);

    int n, m, b;
    cin >> n >> m >> b;
    vector<pair<int, int>> ar;
    for(int i = 0; i < b; i++){
        int x, y;
        cin >> x >> y;
        ar.push_back({x, y});
    }
    set<pair<int, int>> ar2;
    vector<pair<int,int>> ba;
    vector<pair<int,int>> ba2;
    vector<int> fl(4, 0);
```

```cpp
        for(int i = 0; i < 8192; i++){

            int x2, y2;
            while(true){
                x2 = rand2();
                y2 = rand2();
                int f = 0;
                for(auto i : ba){
                    if(check(x2, y2, i.first, i.second, n, m)){
                        f = 1;
                    }
                }
                if(f == 0) {
                    break;
                }
            }
            ba.push_back({x2, y2});
            ar2.insert({x2, y2});
        }
        int cu = 8192;
        for(int i = 0 ; i < sz(ar); i++) {
            cu = cu / 2;
            auto j = ar2.begin();
            vector<pair<int, int>> del;
            while (j != ar2.end()) {
                auto j2 = j;
                j2++;
                if (j2 == ar2.end()) {
                    ar2.erase(j);
                    break;
                }
                int x1 = j->ft;
                int y1 = j->sec;
                int x2 = j2->ft;
                int y2 = j2->sec;
                cout << "?_" << x1 + ar[i].first - 1 << "_" << y1 + ar[i].second - 1 << "_";
                cout << x2 + ar[i].first - 1 << "_" << y2 + ar[i].second - 1 << endl;
                int x, y;
                cin >> x >> y;
                ba2.push_back({x, y});
                for (auto u : ar2) {
                    if (check(u.ft, u.sec, x, y, n, m)) {
                        del.push_back(u);
                    }
                }
                j++;
                j++;
            }
            for (auto j : del) {
                ar2.erase(j);
            }
            while(sz(ar2) > cu){
                ar2.erase(ar2.begin());
            }
        }

    }
    cout << "!_" << ar2.begin()->ft << "_" << ar2.begin()->sec << endl;
    return 0;
    /*
    for(int i = 0; i < sz(ar2); i++){
        int f = 0;
        for(int j= 0; j < sz(ba2); j++){
            if(check(ar2[i].ft, ar2[i].sec, ba2[j].ft, ba2[j].sec, n, m)){
                f = 1;
            }
        }
        if(f == 0){
            cout << "! " << ar2[i].ft << " " << ar2[i].sec << endl;
            return 0;
        }
    }
    //map<pair<int, int>, int> M;

    int x1, y1, x2, y2;
```

```cpp
x1 = rand2();
y1 = rand2();
x2 = rand2();
y2 = rand2();
ba.push_back({x1, y1});
while(true){
    x2 = rand2();
    y2 = rand2();
    int f = 0;
    for(auto i : ba){
        if(check(x2, y2, i.first, i.second, n, m)){
            f = 1;
        }
    }
    if(f == 0) {
        break;
    }
}
ba.push_back({x2, y2});
int a1 = 0, a2 = 0;
int kol = 0;
while(true){
    cout << "? ";
    cout << x1 + ar[a1].first - 1 <<" " << y1 + ar[a1].second - 1 << " ";
    cout << x2 + ar[a2].first - 1 << " " << y2 + ar[a2].second - 1 << endl;
    a1++;
    a2++;
    int x, y;
    cin >> x >> y;
    ba.push_back({x, y});
    if(check(x1, y1, x, y, n, m)){
        while(true){
            x1 = rand2();
            y1 = rand2();
            int f = 0;
            for(auto i : ba){
                if((check(x1, y1, i.first, i.second, n, m))){
                    f = 1;
                }
            }
            //cout << f << endl;
            if(f == 0){
                break;
            }
        }
        ba.push_back({x1, y1});
        a1 = 0;
    }
    if(check(x2, y2, x, y, n, m)){
        while(true){
            x2 = rand2();
            y2 = rand2();
            int f = 0;
            for(auto i : ba){
                if(check(x2, y2, i.first, i.second, n, m)){
                    f = 1;
                }
            }
            if(f == 0) {
                break;
            }
        }
        ba.push_back({x2, y2});
        a2 = 0;
    }
    if(a1 == b){
        cout << "! " << x1 << " " << y1 << endl;
        break;
    }
    if(a2 == b){
        cout << "! " << x2 << " " << y2 << endl;
        break;
    }
    kol += 1;
```

```
        if (kol >= 8191){
            return 1;
        }

    }
    // */
    return 0;
}
```

Task F ()