**Задача A**

#include <iostream>

using namespace std;

int main() {

int n, m; cin >> n >> m;

cout << n - m \* 3;

}

**Задача B**

#include <iostream>

using namespace std;

int main() {

int n, m; cin >> n >> m;

cout << (n - 1) \* (m - 1) + 1;

}

**Задача C**

#include <iostream>

using namespace std;

int main() {

int day1, day2, mon1, mon2;

cin >> day1 >> mon1 >> day2 >> mon2;

int dat1 = mon1 \* 30 + day1, dat2 = mon2 \* 30 + day2;

if (dat2 - dat1 == 13) cout << "Same birthday!";

else cout << "Not the same";

}

**Задача D**

#include <iostream>

using namespace std;

int main() {

int w1, w2, w3, w4, w5, t1, t2, t3, t4, t5, rez\_1 = -1, min\_max, min\_max\_new;

cin >> w1 >> w2 >> w3 >> w4 >> t1 >> t2 >> t3 >> t4;

min\_max = w1 + w2 + w3 + w4 + w5;

int s1 = 0, s2 = 0, sum\_new1, sum\_new2;

if(t1==1){s1+=w1;}else{s2+=w1;}if(t2==1){s1+=w2;}else{s2+=w2;}

if(t3==1){s1+=w3;}else{s2+=w3;}if(t4==1){s1+=w4;}else{s2+=w4;}

sum\_new1 = s1, sum\_new2 = s2;min\_max = max(s1, s2);min\_max\_new = min\_max;

if(t1==1){min\_max\_new=max(sum\_new1-w1,sum\_new2+w1);

if (min\_max\_new < min\_max) {min\_max = min\_max\_new; rez\_1 = 1;}

}else{min\_max\_new=max(sum\_new1+w1,sum\_new2-w1);

if (min\_max\_new < min\_max) {min\_max = min\_max\_new; rez\_1 = 1;}

}if(t2==1){min\_max\_new=max(sum\_new1-w2,sum\_new2+w2);

if (min\_max\_new < min\_max) {min\_max = min\_max\_new; rez\_1 = 2;}

}else {min\_max\_new=max(sum\_new1+w2,sum\_new2-w2);

if (min\_max\_new < min\_max) {min\_max = min\_max\_new; rez\_1 = 2;}

}if (t3 == 1) {min\_max\_new = max(sum\_new1 - w3, sum\_new2 + w3);

if (min\_max\_new < min\_max) {min\_max = min\_max\_new; rez\_1 = 3;}

} else {min\_max\_new = max(sum\_new1 + w3, sum\_new2 - w3);

if (min\_max\_new < min\_max) {min\_max = min\_max\_new; rez\_1 = 3;}

}if (t4 == 1) {min\_max\_new = max(sum\_new1 - w4, sum\_new2 + w4);

if (min\_max\_new < min\_max) {min\_max = min\_max\_new; rez\_1 = 4;}

} else {min\_max\_new = max(sum\_new1 + w4, sum\_new2 - w4);

if (min\_max\_new < min\_max) {min\_max = min\_max\_new; rez\_1 = 4;}

}cout << rez\_1;

}

**Задача E**

#include <iostream>

#include <string>

using namespace std;

int main(){

int N, M;cin >> M >> N; string s = "";

for (int i = 0; i < N; i++) {s += '.';}

for (int i = 0; i < M; i++){

s[i%(N-1)] = 'x';s[N-1-i%(N-1)] = 'x'; cout << s << '\n';

s[i%(N-1)] = '.';s[N-1-i%(N-1)] = '.';

}

}

**Задача F**

#include <iostream>

#include <string>

#include <map>

using namespace std;

int main(){

int N, M, k, c\_1, tshirt\_left = 0;

string s\_1, s\_2, s\_3, read\_size;

map <string, int> sizes;

cin >> N >> M;

for (int i = 0; i < M; i++){cin >> read\_size; sizes[read\_size] = i;}

int a[N][M], absent[N][M];

for (int i = 0; i < N; i++)for (int j = 0; j < M; j++){

cin >> a[i][j];absent[i][j] = 0;

}cin >> k;

for (int g = 0; g < k; g++) {

cin >> c\_1 >> s\_1;

if (a[c\_1 - 1][sizes[s\_1]] > 0)a[c\_1 - 1][sizes[s\_1]]--;

else {

bool find = false;

for (int i = 0; i < N; i++) {

if (a[i][sizes[s\_1]] > 0) {

a[i][sizes[s\_1]]--;

find = true; break;

}

}

if (!find) {

bool find2 = false;

for (int j = sizes[s\_1]; j < M; j++) {

if (a[c\_1 - 1][j] > 0) {a[c\_1 - 1][j]--;

find2 = true;break;}

else {bool find3 = false;

for (int i = 0; i < N; i++)

if (a[i][j] > 0) {a[i][j]--;

find3 = true; break;}

if (find3) { find2 = true; break; }

}

}if (!find2) { absent[c\_1 - 1][sizes[s\_1]]++; }}}}

for (int i = 0; i < N; i++)

for (int j = 0; j < M; j++)tshirt\_left += a[i][j];

for (int i = 0; i < N; i++){

for (int j = 0; j < M; j++)cout << a[i][j] << ' '; cout << endl;}

for (int i = 0; i < N; i++) {

for (int j = 0; j < M; j++) cout << absent[i][j] << ' ';

cout << endl;}

return 0;

}

**Задача G**

#include <iostream>

#include <string>

#include <vector>

#include <algorithm>

#define pb push\_back

#define int\_f int j=0,f4=0

using namespace std;

class contestant{public:int ID;int gen;int grade;int age;int score;};

bool comp(contestant A,contestant B){return A.score>B.score;}

int main(){int n,m;string s;cin>>n;vector<contestant>v(n);

for(int i=0;i<n;i++){cin>>v[i].ID>>s;

if(s=="male")v[i].gen=0;else v[i].gen=1;cin>>v[i].grade>>v[i].age>>v[i].score;}

sort(v.begin(), v.end(), comp); cin >> m;

for(int i=0;i<m;i++){vector<int>rez(0);cin>>s;

if(s=="IOI"||s=="CEOI")for(int j=0;j<min(n,4);j++)rez.pb(v[j].ID);

if(s=="EGOI")for(int\_f;j<n&&f4!=4;j++)if(v[j].gen==1){rez.pb(v[j].ID);f4++;}

if(s=="EJOI")for(int\_f;j<n&&f4!=4;j++)if(v[j].age<16){rez.pb(v[j].ID);f4++;}

if(s=="BaltOI")for(int j=0;j<min(n,6);j++)rez.pb(v[j].ID);

if(s=="BalkOI")for(int\_f;j<n&&f4!=4;j++)if(v[j].grade<11){rez.pb(v[j].ID);f4++;}

if(s=="JBOI")for(int\_f;j<n&&f4!=4;j++)if(v[j].grade<10){rez.pb(v[j].ID);f4++;}

sort(rez.begin(),rez.end());cout<<s<<"\n";

for(int j=0;j<rez.size();j++){cout<<rez[j]<<"\n";}cout << "\n";}

}

**Задача H**

#include <iostream>

#include <map>

#include <queue>

using namespace std;

typedef long long ll;

ll n, k;map<ll, ll>m;priority\_queue<ll>q;

void Add(ll x, ll y) {if (m[x] == 0)q.push(x);m[x] += y;}

void Del(ll x, ll y) {

if(m[x]>y){cout<<x<<endl;exit(0);}

k = y - m[x];y = m[x];m[x] = 0;

Add(x / 2, y);Add((x - 1) / 2, y);q.pop();

}

int main(){cin>>n>>k;k--;

for (int i=0;i<n;i++){ll x;cin >> x;Add(x, 1);}

while (1) {ll m1 = q.top();Del(m1, k);}

}