

# 卡布列克圆舞曲

## 人员

郭栩睿、洪晨栋、洪晨棋、李沛都、陶汇笙、罗启宸、邹忆航、宋吉相、张曦月、王静嘉、崔宸赫 到课

## 作业检查

上周作业链接: <https://www.luogu.com.cn/contest/231079>

2025-0215周六10:30

报名

编辑比赛

题目数5 | 报名人数14

比赛说明 | 题目列表 | 排行榜

名次	参赛者	总分	A	B	C	D	E
#1	洪晨棋	500 (6.70d)	100 (37.18min)	100 (1.12h)	100 (1.64h)	100 (1.94h)	100 (6.48d)
#2	洪晨栋	500 (6.71d)	100 (35.57min)	100 (56.08min)	100 (1.58h)	100 (1.78h)	100 (6.51d)
#3	张昱霖	420 (2.64d)	100 (37.25min)	100 (1.52h)	100 (1.48h)	100 (1.23d)	20 (1.25d)
#4	陶汇笙	400 (4.64h)	100 (31.50min)	100 (46.58min)	100 (1.51h)	100 (1.83h)	
#5	邹忆航	400 (5.22h)	100 (37.68min)	100 (57.77min)	100 (1.68h)	100 (1.95h)	
#6	郭栩睿	400 (6.80d)	100 (38.32min)	100 (3.34d)	100 (1.70h)	100 (3.36d)	
#7	李沛都	400 (24.86d)	100 (6.94d)	100 (6.94d)	100 (6.96d)	100 (6.95d)	
#8	罗启宸	200 (4.71d)			100 (4.36d)	100 (8.26h)	
#9	崔宸赫	187 (2.42h)	100 (40.38min)		87 (1.74h)		
#10	宋吉相	100 (2.43d)			100 (2.43d)		
#11	张曦月	36 (1.46h)			36 (1.46h)		

## 作业

<https://www.luogu.com.cn/contest/232154> (课上讲了 A~C 3 个题, 课后作业是 D 题)

## 课堂表现

今天课上的题目比较复杂一些, 同学们课上做题效果不是很理想, 课下要认真补补题。

## 课堂内容

### P1532 卡布列克圆舞曲

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

```
using namespace std;

typedef long long LL;

LL calc(LL x) {
    vector<int> vec;
    while (x != 0) {
        vec.push_back(x%10), x/=10;
    }

    LL minn = 0, maxx = 0;
    sort(vec.begin(), vec.end());
    for (int i : vec) minn = minn*10 + i;

    reverse(vec.begin(), vec.end());
    for (int i : vec) maxx = maxx*10 + i;

    return maxx - minn;
}

void solve(LL n) {
    set<LL> s;
    while (true) {
        if (s.count(n)) {
            LL t = n;
            while (true) {
                cout << t << " ";
                t = calc(t);
                if (t == n) break;
            }
            cout << endl;
            return;
        } else {
            s.insert(n);
            n = calc(n);
        }
    }
}

int main()
{
    LL n;
    while (cin >> n) {
        solve(n);
    }
    return 0;
}
```

## P1413 坚果保龄球

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

using namespace std;

vector<int> vec[10];

int calc(vector<int> vv) {
    if (vv.empty()) return 0;

    sort(vv.begin(), vv.end());
    int res = 1, time = vv[0], n = vv.size();
    for (int i = 0; i < n; i++) {
        if (vv[i]-time < 60) continue;
        res++, time = vv[i];
    }
    return res;
}

int main()
{
    int n; cin >> n;
    while (n -- ) {
        int x, y; cin >> x >> y;
        vec[x].push_back(y);
    }

    int sum = 0;
    for (int i = 1; i <= 6; i++) {
        sum += calc(vec[i]);
    }
    cout << sum << endl;
    return 0;
}
```

### P1056 [NOIP 2008 普及组] 排座椅

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

using namespace std;

const int maxn = 2000 + 5;
int a[maxn], b[maxn];
struct node {
    int cnt, id;
} c[maxn], d[maxn];
bool cmp1(node p, node q) {
    return p.cnt > q.cnt;
}
bool cmp2(node p, node q) {
    return p.id < q.id;
}
```

```
}

int main()
{
    int n, m, K, L, D; cin >> n >> m >> K >> L >> D;
    while (D -- ) {
        int x1, y1, x2, y2; cin >> x1 >> y1 >> x2 >> y2;
        if (x1 == x2) b[min(y1,y2)]++;
        else a[min(x1,x2)]++;
    }

    for (int i = 1; i <= n; i++) c[i] = {a[i], i};
    for (int i = 1; i <= m; i++) d[i] = {b[i], i};

    sort(c+1, c+n+1, cmp1); sort(d+1, d+m+1, cmp1);
    sort(c+1, c+K+1, cmp2); sort(d+1, d+L+1, cmp2);

    for (int i = 1; i <= K; i++) cout << c[i].id << " ";
    cout << endl;
    for (int i = 1; i <= L; i++) cout << d[i].id << " ";
    cout << endl;
    return 0;
}
```