杂题练习

人员

蔡云翔、石宇燐、胡赫轩、崔嘉睿、程晟泰、梁钰涵、周子航、刘子淇 到课

作业检查

于潇涵 已完成

王梓同 未完成

蔡云翔 未完成

石宇燐 已完成

胡赫轩 已完成

崔嘉睿 已完成

穆鹏宇 已完成

程晟泰 已完成

梁钰涵 已完成

周子航 已完成

刘子淇 已完成

作业

https://www.luogu.com.cn/contest/176980，课上讲的题目要求补完

https://www.luogu.com.cn/contest/176989，这些是课下作业题，要求同学们课下思考实现，下节课讲

课堂表现

同学们在做题时还是会有各种各样的问题，比如：不开 long long，读题不清晰，做题策略问题 等等

以后同学们一定要尽可能细心

课堂内容

CF1828A Divisible Array

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

using namespace std;

void solve() {
```

```cpp
    int n; cin >> n;
    for (int i = 1; i <= n; ++i) cout << i*2 << " ";
    cout << endl;
}

int main()
{
    int T; cin >> T;
    while (T -- ) solve();
    return 0;
}
```

CF1860B Fancy Coins

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

using namespace std;

typedef long long LL;

void solve() {
    int m, k, a1, ak; cin >> m >> k >> a1 >> ak;
    int res = 0;
    int x = m/k, y = m%k;

    if (a1 >= y) a1 -= y;
    else res += y-a1, a1 = 0;

    ak += a1/k;
    res += max(0, x-ak);
    cout << res << endl;
}

int main()
{
    int T; cin >> T;
    while (T -- ) solve();
    return 0;
}
```

CF1272D Remove One Element

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

using namespace std;

typedef long long LL;
const int maxn = 2e5 + 5;
```

```cpp
int w[maxn], f[maxn], s[maxn];

void solve() {
  int n; cin >> n;
  for (int i = 1; i <= n; ++i) cin >> w[i];

  for (int i = 1; i <= n; ++i) {
    if (w[i] > w[i-1]) f[i] = f[i-1] + 1;
    else f[i] = 1;
  }
  for (int i = n; i >= 1; --i) {
    if (w[i] < w[i+1]) s[i] = s[i+1] + 1;
    else s[i] = 1;
  }

  int res = 0;
  for (int i = 1; i <= n; ++i) res = max(res, f[i]);
  for (int i = 2; i <= n-1; ++i) {
    if (w[i+1] > w[i-1]) {
      res = max(res, f[i-1] + s[i+1]);
    }
  }
  cout << res << endl;
}

int main()
{
  int T = 1;
  while (T -- ) solve();
  return 0;
}
```

CF1198A MP3

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

using namespace std;

typedef long long LL;
const int maxn = 4e5 + 5;
int w[maxn];

void solve() {
  int n, I; cin >> n >> I;
  for (int i = 1; i <= n; ++i) cin >> w[i];
  I = (I*8) / n;
  if (I >= 20) { cout << 0 << endl; return; }

  sort(w+1, w+n+1);

  int limit = (1<<I), res = 0;
```

```cpp
    map<int, int> mp;
    for (int l=1, r=0; l <= n; ++l) {
      r = max(r, l-1);
      while (r+1<=n && ((int)mp.size()<limit || mp.count(w[r+1]))) {
        mp[w[r+1]]++;
        ++r;
      }
      res = max(res, r-l+1);
      mp[w[l]]--;
      if (mp[w[l]] == 0) mp.erase(w[l]);
    }

    cout << n-res << endl;
}

int main()
{
  int T = 1;
  while (T -- ) solve();
  return 0;
}
```

AT_abc290_e [ABC290E] Make it Palindrome

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

using namespace std;

typedef long long LL;
const int maxn = 2e5 + 5;
int w[maxn];
vector<int> vec[maxn];

LL calc(int n, vector<int> vv) {
  LL res = 0;
  int len = vv.size();
  for (int i = 0, j = len-1; i < j; ) {
    int x = vv[i], y = vv[j];
    int lDis = x, rDis = n-y+1;
    if (lDis <= rDis) res += (LL)lDis * (j-i), ++i;
    else res += (LL)rDis * (j-i), --j;
  }
  return res;
}

int main()
{
  int n; cin >> n;
  for (int i = 1; i <= n; ++i) {
    cin >> w[i];
    vec[w[i]].push_back(i);
```

```cpp
    }

    LL res = 0;
    for (int i = 2; i <= n; ++i) res += ((LL)n-i+1) * (i/2);

    for (int i = 1; i <= n; ++i) res -= calc(n, vec[i]);

    cout << res << endl;
    return 0;
}
```