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Arkavidia 9.0 - Penyisihan CP > C

Submission #4668824

Arkavidia 9.0 - Penyisihan CP / C. Cicip Cokelat

Accepted • yusuf601 • C++20 • December 2, 2025 at 20:36:42

[Sample Test Data Results](#) [Test Data Results](#)

```
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 typedef long long ll;
5 const ll MOD = 998244353;
6 const ll g = 3;
7
8 ll power(ll a, ll b, ll mod = MOD) {
9     ll res = 1;
10    a %= mod;
11    if (a < 0) a += mod;
12    while (b > 0) {
13        if (b & 1) res = res * a % mod;
14        a *= a;
15        b >>= 1;
16    }
17    return res;
18}
19
20 ll mod_inverse(ll a) { return power(a, MOD - 2); }
21
22 void ntt(vector<ll>& a, bool invert) {
23     int n = a.size();
24     for (int i = 1, j = 0; i < n; i++) {
25         int bit = n >> 1;
26         for (; j & bit; bit >>= 1) j ^= bit;
27         if (i < j) swap(a[i], a[j]);
28     }
29     for (int len = 2; len <= n; len <= 1) {
30         ll w = invert ? mod_inverse(g) : g;
31         w = power(w, (MOD - 1) / len);
32         for (int i = 0; i < n; i += len) {
33             ll wn = 1;
34             for (int k = 0; k < len / 2; k++) {
35                 ll u = a[i + k];
36                 ll v = a[i + k + len / 2] * wn % MOD;
37                 a[i + k] = (u + v) % MOD;
38                 a[i + k + len / 2] = (u - v + MOD) % MOD;
39                 wn = wn * w % MOD;
40             }
41         }
42     }
43     if (invert) {
44         for (int i = 0; i < n; i++) {
45             a[i] /= n;
46         }
47     }
48 }
49
50 int main() {
51     ios_base::sync_with_stdio(false);
52     cin.tie(NULL);
53
54     int N, K; ll M;
55     cin >> N >> M >> K;
56
57     int total = 0; --N;
58     vector<ll> f(size, 0);
59
60     for (int i = 0; i < N; i++) {
61         ll a; cin >> a;
62         f[(i + 1) % size] = (f[(i + 1) % size] + a) % MOD;
63         total = (total + a) % MOD;
64     }
65
66     ntt(f, false);
67     for (int i = 0; i < size; i++) f[i] = power(f[i], M);
68     ntt(f, true);
69
70     ll inv_denom = mod_inverse(power(total, M));
71
72     for (int j = 1; j <= size; j++) {
73         ll prob = f[j] == size ? 0 : j * inv_denom % MOD;
74         cout << prob << (j < size ? " " : "\n");
75     }
76 }
77
78 }
```

Your score

not attempted

Spoilers

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solved by 5 / 8

Top users by time

#	User	Time
1	Raphela	162 ms
3	yusuf601	178 ms
4	nandonathaniel	225 ms
5	SunShine11	403 ms

Top users by memory

#	User	Memory
1	Raphela	4940 KB
2	yusuf601	5200 KB
3	nandonathaniel	5416 KB
4	AhmadRomy	14956 KB