

Problem Menu

Statement

Submissions

Your score

not attempted

Spoilers

Show difficulty

Show tags

solved by 29 / 36

dynamic programming: combinatorics

math: number theory

Top users by time

#	User	Time
1	Retr0Foxx	21 ms
2	bagasangga	23 ms
3	frennn	34 ms
4	mhasan01	42 ms
5	YukiSaki	43 ms

Top users by memory

#	User	Memory
1	Retr0Foxx	1096 KB
2	hitsuu	1452 KB
3	Raphela	1656 KB
4	YukiSaki	2124 KB
5	ftri	2316 KB

Arkavidia 9.0 - Penyisihan CP

M

Submission #4521271

Arkavidia 9.0 - Penyisihan CP / M. Main GCD

Accepted · Retr0Foxx · C · October 21, 2025 at 20:38:11

Sample Test Data Results

Test Data Results

```
1 #include <stdio.h>
2
3 #define MOD (int)(998244353)
4 #define MAXN 200005
5
6 int sieve[MAXN];
7 int freq[MAXN];
8
9 #define ll long long
10 // #define printf
11
12 ll powmod(ll x, ll p)
13 {
14     ll res = 1;
15     ll a = x;
16     while (p)
17     {
18         if (p & 1) res = (res * a) % (ll)MOD;
19         a = (a*a) % (ll)MOD;
20         p /= 2;
21     }
22     return res;
23 }
24
25 void setat(int i)
26 {
27     sieve[i/32] |= (1 << (i % 32));
28 }
29
30 int getat(int i)
31 {
32     return !(sieve[i/32] & (1 << (i % 32)));
33 }
34
35 // gpt im sorry
36 int fastReadInt() {
37     int x = 0, c = getchar();
38     int neg = 0;
39     while (c < '0' || c > '9') {
40         if (c == '-') neg = 1;
41         c = getchar();
42     }
43     for (; c >= '0' && c <= '9'; c = getchar())
44         x = (x << 3) + (x << 1) + (c - '0');
45     return neg ? -x : x;
46 }
47
48 signed main()
49 {
50     /*
51     std::ios_base::sync_with_stdio(false);
52     std::cin.tie(nullptr);
53     std::cout.tie(nullptr);*/
54
55     int n = fastReadInt();
56
57     for (int i = 1; i <= n; ++i)
58     {
59         int current = fastReadInt();
60         freq[current]++;
61     }
62     int res = 1;
63     for (int i = 2; i*i <= 200000; ++i)
64     {
65         if (getat(i)) continue;
66         for (int j = i*i; j <= 200000; j += i)
67             setat(j);
68     }
69     for (int i = 2; i <= 200000; ++i)
70     {
71         if (getat(i)) continue;
72         ll total = 0;
73         //printf("%i\n", i);
74         for (ll j = i; j <= 200000; j*=i)
75         {
76             int current = 0;
77             for (int k = j; k <= 200000; k += j)
78             {
79                 // base = j, hmm = k[i]
80                 current += freq[k];
81             }
82             total += (ll)current*(ll)(current-1)/2;
83             //if (current) printf("at %i, current=%i\n", i, current);
84         }
85         res = (((ll)res) * powmod(i, total)) % (ll)MOD;
86     }
87     //std::cout << res << "\n";
88     //printf("%i\n", res);
89     int yes = 0;
90     for (int p10 = 1000000000; p10 >= 1; p10/=10)
91     {
92         if (res >= p10 || yes) {yes = 1; putchar('0' + (res/p10));}
93         res -= p10 * (res/p10);
94     }
95     putchar(0xa);
96     return 0;
97 }
```

