

# Alavara Dejavu

locked

Problem	Submissions	Leaderboard	Discussions
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Submitted a day ago • Score: 100.00

Status: Accepted

✓	Test Case #0	✓	Test Case #1	✓	Test Case #2
✓	Test Case #3	✓	Test Case #4	✓	Test Case #5
✓	Test Case #6	✓	Test Case #7	✓	Test Case #8

## Submitted Code

Language: C++20

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```
1 // HEADERS AND NAMESPACE
2 #include <bits/stdc++.h>
3 using namespace std;
4
5 // CONSTANTS
6 const int mod = 1000000007;
7 // const int mod = 998244353;
8
9 // COMMONLY USED TYPES
10 typedef long long ll;
11 typedef long double ld;
12 typedef vector<int> vi;
13 typedef vector<ll> vll;
14 typedef pair<int, int> pi;
15 typedef pair<ll, ll> pl;
16 typedef vector<pi> vpi;
17 typedef vector<pl> vpl;
18
19 // LOOPS
20 #define FOR(i, l, r) for (ll i = l; i <= (r); i++)
21 #define F0R(i, n) for (ll i = 0; i < (n); i++)
22 #define F0Rd(i, a, b) for (ll i = (b)-1; i >= a; i--)
23 #define F0Rd(i, a) for (ll i = (a); i >= 0; i--)
24 #define trav(x, a) for (auto &x : a)
25
26 // SHORT HAND
27 #define pb push_back
28 #define mp make_pair
29 #define fi first
30 #define se second
31 #define sz(a) int((a).size())
32 #define fill(x, y) memset(x, y, sizeof(y))
33 #define all(x) (x).begin(), (x).end() // Forward traversal
34 #define endl "\n"
35 #define max(a, b) (a < b ? b : a)
36 #define min(a, b) ((a > b) ? b : a)
37
38 ll gcd(ll a, ll b)
39 {
40     return b ? gcd(b, a % b) : a;
41 }
42
```

```

43 #define watch(x) cout << (#x) << " is : " << (x) << "\n"
44 #define watch2(x, y) cout << (#x) << " is " << (x) << " and " << (#y) << " is " << (y) << "\n"
45
46 // First Variable Needs to be Ans like ans = max(ans,xyz)
47 template <class T>
48 bool ckmin(T &a, const T &b)
49 {
50     return b < a ? a = b, 1 : 0;
51 }
52 template <class T>
53 bool ckmax(T &a, const T &b)
54 {
55     return a < b ? a = b, 1 : 0;
56 }
57 // BE COOL AND FOCUS ON ACCURATE & SIMPLE CODE!
58 // -----TEMPLATE ENDS-----
59
60 // All Variables Here
61
62 // All Functions Here
63
64 int md;
65
66 inline void add(int &a, int b)
67 {
68     a += b;
69     if (a >= md)
70         a -= md;
71 }
72
73 inline void sub(int &a, int b)
74 {
75     a -= b;
76     if (a < 0)
77         a += md;
78 }
79
80 inline int mul(int a, int b)
81 {
82     return (int)((long long)a * b % md);
83 }
84
85 inline int power(int a, long long b)
86 {
87     int res = 1;
88     while (b > 0)
89     {
90         if (b & 1)
91         {
92             res = mul(res, a);
93         }
94         a = mul(a, a);
95         b >>= 1;
96     }
97     return res;
98 }
99
100 inline int inv(int a)
101 {
102     return power(a, md - 2);
103 }
104
105 void solve()
106 {
107     ll a, b, x;
108     cin >> a >> b >> x;
109
110     // Program for First x Digits of a^b
111
112     ll fst;
113     double y = (double)b * log10(a * 1.0);
114     // number after decimal
115     y = y - (ll)y;
116     // Find 10 ^ y
117     double tmp = pow(10.0, y);

```

```
118 // Move the Decimal Point x - 1 digits forward
119 fst = tmp * (1LL) * pow(10, x - 1);
120
121 // Program for Last x Digits of a^b
122 ll p = 1;
123 FOR(i, 1, x)
124 {
125     p *= 10;
126 }
127 md = (int)p;
128
129 ll pw = power(a, b);
130 string lst = to_string(pw);
131 ll l2 = lst.length();
132
133 while (l2 < x)
134 {
135     lst = "0" + lst;
136     l2++;
137 }
138
139 // First and Last x Digits of a^b
140 cout << fst << " " << lst << endl;
141
142 return;
143 }
144
145 int main()
146 {
147     ios_base::sync_with_stdio(false);
148     cin.tie(0);
149     // If No Test Case, Then Comment it!
150     int tc = 1;
151     // cin >> tc;
152     while (tc--)
153     {
154         solve();
155     }
156     return 0;
157 }
158
```