Description   My Submissions   Hints/Editorial   AC Submissions   Video Editorials   My Notes (0)

LR Power Sum Query

🔖   **? Ask Doubt**

⏱ Time-Limit: 4 sec   ✏ Score: 100.00/100   Difficulty : ★★★

💾 Memory: 256 MB   ✔ Accepted Submissions: 100 Relevant For: AZ-201   AZ-202   AZ-301

Description

Given an array of N integers, Q queries, and an integer K. In each query two integers L, R is given, you have to find $(A[L] + A[L+1] * K + A[L+2] * K^2 + …. A[R] * K^{(R-L)})\% 10^9+7$.

Input Format

The first line contains three space-separated integers N, Q, K where $1<=N<=10^6$, $1<=Q<=10^6$, $1<=K<=10^9$.

Next line contains N space-separated integers $(-1e9<=A_i<=1e9)$.

Next Q lines contain two space-separated integers L, R where $1<=L<=R<=N$.

Output Format

For each query print the value of $(A[L] + A[L+1] * K + A[L+2] * K^2 + …. A[R] * K^{(R-L)})\% 10^9+7$ in a new line.

Sample Input 1   ⧉ Copy

```
10 10 234565
12 -23 -123 2345 2345 44 345 -93945 -5353 1
1 5
1 8
1 10
2 2
6 6
4 8
2 9
4 10
3 6
5 9
```

Sample Output 1   ⧉ Copy

```
644011223
645979052
534876628
999999984
44
725883751
```

C++14[GCC] ▼

🔄 ⧉ ⬆   Submit

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