# K. TONTON AND SUPERCOMPUTER

*Time limit: 1s | Memory limit: 512MB*
*Input stream: stdin | Output stream: stdout*

Yuta is interested in computer science, he had spent half of his life to create a supercomputer in order to count how many time his little sweetie Bella gets angry with him, and he succeeded. Yuta's supercomputer has an incredible ability to deal with super ultra big integer. However, Yuta needs to test it carefully by solving a much simpler problem: Reducing Fraction.

The task is as follows. Given two sequences $a_1, a_2, .., a_m$ and $b_1, b_2, .., b_n$ and an integer number $M$. Find two coprime integers $P$ and $Q$ such that $\frac{a_1 \times a_2 \times .. \times a_m}{b_1 \times b_2 \times .. \times b_n} = \frac{P}{Q}$.

**Input**

- The first line consists of three integer number $m, n, M$ ($1 \le m, n \le 1000, 1 \le M \le 10^{15}$).
- The second line contains $m$ integer numbers $a_1, a_2, .., a_m$ ($1 \le a_i \le 10^{15}$).
- The second line contains $n$ integer numbers $b_1, b_2, .., b_n$ ($1 \le b_i \le 10^{15}$)..

**Output**

- The first line is the reminder of $P$ after dividing $M$.
- The second line is the reminder of $Q$ after dividing $M$.

**Sample**

| Input | Output |
|---|---|
| 2 3 100<br>3 30<br>1 2 27 | 5<br>3 |