

Huge GCD



Gayasen has received a homework assignment to compute the greatest common divisor of the two positive integers **A** and **B**. Since the numbers are quite large, the professor provided him with **N** smaller integers whose product is **A**, and **M** integers with product **B**. He would like to verify result, so he has asked you to write a program to solve his problem. But instead of printing complete answer you have to print answer modulo 10^9+7 .

Input

First line of input contains the positive integer **N** ($1 \leq N \leq 1000$).

Second line of input contains **N** space-separated positive integers not greater than 10^4 , whose product is the number **A**.

Third line of input contains the positive integer **M** ($1 \leq M \leq 1000$).

Fourth line of input contains **M** space-separated positive integers not greater than 10^4 , whose product is the number **B**.

OUTPUT

Print the greatest common divisor of numbers **A** and **B** modulo **1000000007**.

Constraints

$1 \leq N, M \leq 1000$

$1 \leq \text{element of list} \leq 10000$

Sample Input #00

```
5
2 2 3 3 25
4
8 1 6 170
```

Sample Output #00

```
60
```

Sample Input #01

```
13
1 2 4 8 32 64 128 256 512 1024 2048 4096 8192
9
1 3 9 27 81 243 729 2187 6561
```

Sample Output #01

```
1
```

Sample Input #02

```
3
2 3 5
2
4 5
```

Sample Output #02

Explanation

Sample Case #00: Here $A = 2 \times 2 \times 3 \times 3 \times 25 = 900$, while $B = 8 \times 1 \times 6 \times 170 = 8160$. Greatest common divisor of 900 and 8160 is 60.

Sample Case #01: In first list all number are of form 2^a and in second they are of form 3^a . As these two list doesn't share any factor, their gcd is 1.

Sample Case #02: The greatest common divisor of numbers $A(=30)$ and $B(=20)$ equals 10.