



Waiter

by dcod5

Problem

Submissions

Leaderboard

Discussions

Editorial

You are a waiter at a party. There are N stacked plates on pile A_0 . Each plate has a number written on it. Then there will be Q iterations. In i -th iteration, you start picking up the plates in A_{i-1} from the top one by one and check whether the number written on the plate is divisible by the i -th prime. If the number is divisible, you stack that plate on pile B_i . Otherwise, you stack that plate on pile A_i . After Q iterations, plates can only be on pile $B_1, B_2, \dots, B_Q, A_Q$. Output numbers on these plates from top to bottom of each piles in order of $B_1, B_2, \dots, B_Q, A_Q$.

Input Format

The first line contains two space separated integers, N and Q .

The next line contains N space separated integers representing the initial pile of plates, i.e., A_0 . The leftmost value represents the bottom plate of the pile.

Constraints

$$1 \leq N \leq 5 \times 10^4$$

$$2 \leq \text{number}_i \leq 10^4$$

$$1 \leq Q \leq 1200$$

Output Format

Output N lines. Each line contains a number written on the plate. Printing should be done in the order defined above.

Sample Input 0

```
5 1
3 4 7 6 5
```

Sample Output 0

```
4
6
3
7
5
```

Explanation 0

Initially:

$$A_0 = [3, 4, 7, 6, 5] \leftarrow \text{TOP}$$

After 1 iteration:

$$A_0 = [] \leftarrow \text{TOP}$$

$$B_1 = [6, 4] \leftarrow \text{TOP}$$

$$A_1 = [5, 7, 3] \leftarrow \text{TOP}$$

We should output numbers in B_1 first from top to bottom, and then output numbers in A_1 from top to bottom.

Sample Input 1

```
5 2
3 3 4 4 9
```

Sample Output 1

```
4
4
9
3
3
```

Explanation 1

Initially:

$A_0 = [3, 3, 4, 4, 9]$ <-TOP

After 1^{st} iteration:

$A_0 = []$ <-TOP

$B_1 = [4, 4]$ <-TOP

$A_1 = [3, 3, 9]$ <-TOP

After 2^{nd} iteration:

$A_1 = []$ <-TOP

$B_1 = [4, 4]$ <- TOP

$B_2 = [3, 3, 9]$ <-TOP

We should output numbers in B_1 first from top to bottom, and then output numbers in B_2 from top to bottom.

[f](#) [t](#) [in](#)

Submissions: [4664](#)

Max Score: 75

Difficulty: Medium

Rate This Challenge:

☆☆☆☆☆

[More](#)

Current Buffer (saved locally, editable) [🔗](#) [🔄](#)

C++



```
1 #include <bits/stdc++.h>
2
3 using namespace std;
4
5 int main() {
6     int n;
7     int q;
8     cin >> n >> q;
9     vector<int> number(n);
10    for(int number_i = 0; number_i < n; number_i++){
11        cin >> number[number_i];
12    }
13    return 0;
14 }
15
```

Line: 1 Col: 1

 [Upload Code as File](#)☐ Test against custom input[Run Code](#)[Submit Code](#)

Join us on IRC at [#hackerrank](#) on freenode for hugs or bugs.

[Contest Calendar](#) | [Blog](#) | [Scoring](#) | [Environment](#) | [FAQ](#) | [About Us](#) | [Support](#) | [Careers](#) | [Terms Of Service](#) | [Privacy Policy](#) | [Request a Feature](#)