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# Waiter ☆

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**Problem** 

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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,  $oldsymbol{N}$  and  $oldsymbol{Q}$ .

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

### **Constraints**

 $1 \le N \le 5 imes 10^4$ 

 $2 \leq number_i \leq 10^4$ 

 $1 \le Q \le 1200$ 

#### **Output Format**

Output  $m{N}$  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

3

7 5

### **Explanation 0**

Initially:

 $A_0 = [3, 4, 7, 6, 5] < -TOP$ 

After 1 iteration:

 $A_0$  = []<-TOP

 $m{B_1}$  = [6, 4]<-TOP

 $A_1 = [5, 7, 3] < -TOP$ 

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

Author dcod5 Difficulty Medium Max Score 75 Submitted By 7778

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### MORE DETAILS

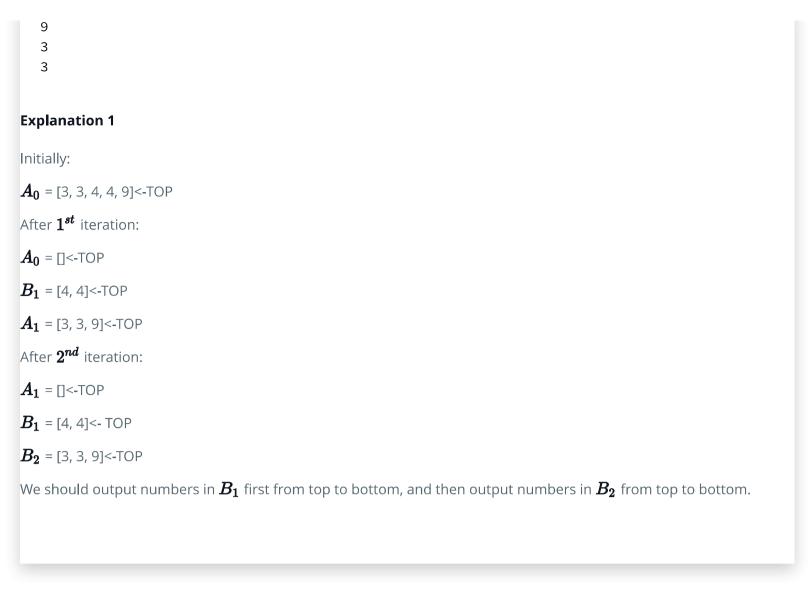
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