CCC '14 S1 - Party Invitation

Time limit: 2.0s **Memory limit:** 256M

Canadian Computing Competition: 2014 Stage 1, Junior #4, Senior #1

You are hosting a party and do not have room to invite all of your friends. You use the following unemotional mathematical method to determine which friends to invite.

Number your friends $1, 2, \ldots, K$ and place them in a list in this order. Then perform m rounds. In each round, use a number to determine which friends to remove from the ordered list.

The rounds will use numbers $r_1, r_2, \ldots, r_m$. In round i remove all the remaining people in positions that are multiples of r_i (that is, $r_i, 2r_i, 3r_i, \ldots$) The beginning of the list is position 1.

Output the numbers of the friends that remain after this removal process.

Input Specification

The first line of input contains the integer K $(1 \leq K \leq 100)$. The second line of input contains the integer m $(1 \leq m \leq 10)$, which is the number of rounds of removal. The next m lines each contain one integer. The i^{th} of these lines $(1 \leq i \leq m)$ contains r_i $(2 \leq r_i \leq 100)$ indicating that every person at a position which is multiple of r_i should be removed.

Output Specification

The output is the integers assigned to friends who were not removed. One integer is printed per line in increasing sorted order.

Sample Input

```
10
2
2
3
```

Output for Sample Input

```
1
3
7
9
```

Explanation of Output for Sample Input

Initially, our list of invitees is $1, 2, 3, 4, 5, 6, 7, 8, 9, 10$. There will be two rounds of removals. After the first round of removals, we remove the even positions (i.e., every second position), which causes our list of invitees to be $1, 3, 5, 7, 9$. After the second round of removals, we remove every 3rd remaining invitee: thus, we keep 1 and 3, remove 5 and keep 7 and 9, which leaves us with an invitee list of $1, 3, 7, 9$.