Overview: Rearrange a given sequence according to a set of rules

Description: Insert the elements of the given sequence one at a time into the new sequence from left t right. When inserting a new element, place it in a position such that it only neighbor elements with which it is relatively prime. If there is more than one such position, insert it i the last one. If there is no such position, insert the element at the end of the sequence.

Filename: bug5.{java, cpp, py}

Input: The first line contains a single integer n, the length of the sequence. The second lin contains n space-separated integers representing the elements of the sequence.

Output: Print the new sequence when constructed by the rules explained above.

Assumptions: All input will be valid.
$1 \le n \le 1000$
All elements will be between 2 and 1,000,000, inclusive.

Sample Input:
```
4
6 5 3 4
```

Sample Output:
```
6 5 3 4
```