Problem B
A King Who Hates Prime Numbers

Input file: *testdata.in*

Time limit: 1 seconds

Problem Description

Once upon a time, there was a king who hates prime numbers. Moreover, the king likes numbers with larger numbers of integral factors. At the end of each year, the king reviews the amount of tax collected from all counties. The most important job of his minister of taxation is to sort the amounts of tax into the appropriate order so that the king sees the numbers that he likes earlier than those that he dislikes. Also, the minister has to make sure that no prime numbers appear in the list.

Given a sequence of T positive integers $N_1, N_2, \ldots, N_T$, the minister of taxation has to sort these T numbers so that, for any two distinct numbers N_i and N_j with $1 \leq i \neq j \leq T$, N_i precedes N_j in the output sorted list if

- N_i has more integral factors than N_j, or

- N_i and N_j have the same number of integral factors and $N_i > N_j$.

Also, if N_k with $1 \leq k \leq T$ is a prime number, then N_k has to be removed from the output sorted list.

Technical Specification

- $1 \le T \le 100$

- $2 \le N_i \le 1000000000$

Input Format

In the first line of the input file there is an integer C, indicating the number of distinct test cases to be followed. Each of the next C lines stands for a test case. For each test case, there is an integer T, followed by T integers. The i-th integer N_i in the list indicates the amount of tax collected from the i-th county in the kingdom.

Output Format

Output should be C lines of integers. The integers in j-th line represents the sorted list from the j-th test case, where the prime numbers are removed.

Sample Input

```
2
9 6 2 3 4 2 4 6 5 8
4 12 11 10 16
```

Sample Output

```
8 6 6 4 4
12 16 10
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