# A. Co-prime Array

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given an array of $n$ elements, you must make it a co-prime array in as few moves as possible.

In each move you can insert any positive integral number you want not greater than $10^9$ in any place in the array.

An array is co-prime if any two adjacent numbers of it are co-prime.

In the number theory, two integers $a$ and $b$ are said to be co-prime if the only positive integer that divides both of them is $1$.

## Input

The first line contains integer $n$ $(1 \le n \le 1000)$ — the number of elements in the given array.

The second line contains $n$ integers $a_i$ $(1 \le a_i \le 10^9)$ — the elements of the array $a$.

## Output

Print integer $k$ on the first line — the least number of elements needed to add to the array $a$ to make it co-prime.

The second line should contain $n + k$ integers $a_j$ — the elements of the array $a$ after adding $k$ elements to it. Note that the new array should be co-prime, so any two adjacent values should be co-prime. Also the new array should be got from the original array $a$ by adding $k$ elements to it.

If there are multiple answers you can print any one of them.

### Example

| input |
| --- |
| 3<br>2 7 28 |

| output |
| --- |
| 1<br>2 7 9 28 |