Problem E. Express Sum of Remainders

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	128 megabytes

Given a multiset (elements may be duplicates), K of integers >= 2, the sum of remainders function associated with K, S_K, defined on non-negative integers, n, is given by: $S_k(n) = \sum (k \text{ in } K \mid n \bmod k)$.

For instance, if K = 2, 5, 5, 11

$S_k(23) = 23 \bmod 2 + 23 \bmod 5 + 23 \bmod 5 + 23 \bmod 11 = 1 + 3 + 3 + 1 = 8$.

Note that $S_K(0) = 0$ for any K.

For this problem you will write a program which takes as input the values of $S_k(n)$ for n from 1 to N for some unknown multiset K. The program will output the number of integers in K followed by the integers in K in non-decreasing order.

Input

Input consists of multiple lines. The first line contains a single decimal integer N, $(1 \le N \le 100)$, which is the number of values of $S_k(n)$, $(1 \le n \le N)$, that follow. The following lines contain the N values as space separated decimal integers, 10 values per line (except perhaps for the last line).

Output

There is one line of output containing a space separated sequence of decimal integers. The first value is the number, m, of integers in the multiset K. This is followed by the m integers of the multiset K in non-decreasing order. Note: if a value is a member multiple times, it should appear in the list that many times.

Examples

standard input	standard output
16 4 6 10 12 6 8 12 14 18 10 3 5 9 11 5 7	4 2 5 5 11
20 3 6 6 9 12 6 2 5 5 8 11 5 8 4 4 7 10 4 7 10	3 3 6 7