

## Problem N: Noncoprime Subsequences

- Time Limit: 2 sec

### Problem Statement

Given a sequence  $A = (A_1, A_2, \dots, A_N)$ , a **good subsequence** of  $A$  is defined as a subsequence, that is not necessarily contiguous, where adjacent elements in the subsequence are not coprime.

Find the maximum length  $L$  of a **good subsequence** of  $A$ . Also, determine the number of **good subsequences** of length  $L$ , modulo **998,244,353**.

### Input

The input is given in the following format:

- $N$   
 $A_1 \ A_2 \ \dots \ A_N$
- $1 \leq N \leq 200,000$
  - $1 \leq A_i \leq 10^6$
  - All input values are integers.

### Output

Output 2 lines. On the first line, output  $L$ . On the second line, output the number of **good subsequences** of length  $L$  of  $A$ , modulo **998,244,353**.

Sample Input 1	Sample Output 1
3 2 3 6	2 2
Sample Input 2	Sample Output 2
5 1 1 1 1 1	1 5
Sample Input 3	Sample Output 3
10 631932 735902 895728 78537 723857 330739 286918 329211 539679 238506	7 2