



```
/*                               North American */  
/*      Invitational Programming Contest */  
/* Hosted by the University of Chicago */  
/*                               28-30 March, 2014 */
```

E: GCDs

Given a sequence A of n numbers, define $f(\mathbf{lo}, \mathbf{hi})$, $1 \leq \mathbf{lo} \leq \mathbf{hi} \leq n$, as the Greatest Common Divisor of all the numbers $A_{\mathbf{lo}}$ through $A_{\mathbf{hi}}$, inclusive. Note that \mathbf{lo} and \mathbf{hi} are indices, not members of the list. Given an array, considering all possible values of \mathbf{lo} and \mathbf{hi} , how many unique values of $f(\mathbf{lo}, \mathbf{hi})$ will there be?

Input

There will be several test cases in the input. Each test case will begin with a line with a single integer n ($1 \leq n \leq 100,000$) representing the length of the sequence. The next n lines will each have an integer a ($1 \leq a \leq 100$). These are the numbers in the sequence, in sequence order. The input will end with a line with a single 0.

Output

For each test case, output a single integer denoting the number of unique values $f(\mathbf{lo}, \mathbf{hi})$ can have for the input sequence. Do not output any spaces, and do not print any blank lines between answers.

Sample Input	Sample Output
2	3
4	5
6	
3	
3	
6	
8	
0	