E: GCDs

Given a sequence **A** of ***n*** numbers, define f(**lo**,**hi**), 1≤**lo**≤**hi**≤***n***, as the Greatest Common Divisor of all the numbers $\mathbf{A_{lo}}$ through $\mathbf{A_{hi}}$, inclusive. Note that **lo** and **hi** are indices, not members of the list. Given an array, considering all possible values of **lo** and **hi**, how many unique values of f(**lo**,**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≤***n***≤100,000) representing the length of the sequence. The next ***n*** lines will each have an integer ***a*** (1≤***a***≤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(**lo**,**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 4 6 3 3 6 8 0	3 5