Let \( x_1, \ldots, x_n \) be a non-empty sequence of natural numbers, all of them strictly larger than 1, and let \( \gcd(x, y) \) stand as usual for the greatest common divisor of \( x \) and \( y \). We say that \( x_i \) is a friend of \( x_j \) if and only if at least one of these conditions hold:

- \( \gcd(x_i, x_j) > 1 \);
- \( x_i \) is a friend of some \( x_k \), and \( x_j \) is also a friend of \( x_k \).

Write a program such that, given a sequence of numbers, computes the size of the largest set of friends in it.

**Input**

Input consists of several cases. Every case begins with a number \( n \geq 1 \), followed by \( n \) different integer numbers, all them between 2 and 100000.

**Output**

For every case, print the size of the largest set of friends.

<table>
<thead>
<tr>
<th>Sample input</th>
<th>Sample output</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 21 2 25 14</td>
<td>3 1</td>
</tr>
<tr>
<td>3 5 18 7</td>
<td></td>
</tr>
</tbody>
</table>

**Problem information**

Author: Salvador Roura
Generation: 2013-10-01 20:18:16