D. Savior

time limit per test: 4 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Misha decided to help Pasha and Akim be friends again. He had a cunning plan — to destroy all the laughy mushrooms. He knows that the laughy mushrooms can easily burst when they laugh. Mushrooms grow on the lawns. There are $a[t]$ mushrooms on the t-th lawn.

Misha knows that the lawns where the mushrooms grow have a unique ability. A lawn (say, i) can transfer laugh to other lawn (say, j) if there exists an integer (say, b) such, that some permutation of numbers $a[i]$, $a[j]$ and b is a *beautiful triple* ($i \neq j$). A beautiful triple is such three pairwise coprime numbers x, y, z, which satisfy the following condition: $x^2 + y^2 = z^2$.

Misha wants to know on which minimal number of lawns he should laugh for all the laughy mushrooms to burst.

Input

The first line contains one integer n ($1 \leq n \leq 10^6$) which is the number of lawns. The next line contains n integers a_i which are the number of mushrooms on the i-lawn ($1 \leq a_i \leq 10^7$). All the numbers are different.

Output

Print a single number — the minimal number of lawns on which Misha should laugh for all the mushrooms to burst.

Examples

input
1 2
output
1

input
2 1 2
output
2

input
2 3 5
output
1