Problem G. Remove the Prime

Input file:	*standard input*
Output file:	*standard output*
Time limit:	5 seconds
Memory limit:	256 mebibytes

Two players play a game using an array of positive integers. They make alternating moves, the player who cannot make a move loses. In one move you have to choose a **prime** number p and a non-empty segment $[l; r]$ of the array such that all numbers in this segment are divisible by p, and then remove **all** factors p from each of them. Removing all factors means that we take a number and divide it by p while it is divisible.

Determine who wins if both players play optimally.

Input

The first line contains one integer n ($1 \le n \le 1000$) — the size of array.

The second line contains the array of integers $a_1, a_2, \ldots, a_n$ itself ($1 \le a_i \le 10^{18}$).

Output

Print "`First`" (without quotes) if first player wins and "`Second`" (without quotes) otherwise.

Examples

standard input	standard output
3 2 8 4	First
3 2 12 3	Second