A Non-Palindromic Modification

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

A sequence a of length n is called *palindromic* if $a_i = a_{n-i+1}$ for all $1 \le i \le n$.

You are given the sequence b of n integers $b_1, b_2, \ldots, b_n$. Determine whether it is possible to increase **exactly one** element of b by 1 in such a way that the resulting sequence will **not** be palindromic.

Input

The first line of the input contains one integer n ($1 \le n \le 1000$) — the length of the input sequence. The i-th of the following n lines contains one integer b_i ($1 \le b_i \le 1000$) — the i-th element of sequence b.

Output

If it is possible to increase exactly one b_i by 1 and get the sequence that is not palindromic, print `1` in the only line of the output. Otherwise, print `0`.

Examples

standard input	standard output
1 1	0
2 20 21	1