E. Alternating Array

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

An array of integers is said to be alternating if each element has a different sign than the one next to it.

$i.e.$ for each element in the array such that $(0 \leq i < n)$, **only one** of these conditions must be met:-

1. if $a_i < 0$ then $a_{i+1} > 0$.
2. if $a_i > 0$ then $a_{i+1} < 0$.

For example, [1, -3, 2] and [3] are alternating arrays, while [1,-3, -2] and [1, 2] are not.

You are given an array a of n integers, in one operation, you are allowed to choose a number and multiply it by -1 (change its sign). what is the minimum number of operations required to convert the given array into an alternating array.

Input
The first line contains an integer $n(1 \leq n \leq 10^5)$ the number of elements in the array a

The second line contains n integers $a_i(-50 \leq a_i \leq 50, a_i \neq 0)$ the elements of the array a.

Output
Output the minimum number of operations needs to convert the given array into an alternative one.

Examples

input	Copy
3 3 4 2	

output	Copy
1	

input	Copy
5 1 -2 3 -4 5	

output	Copy
0	

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- Sheet #1 (Data type - Conditions)

Contest #3.1

Finished

Practice

→ About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the link.