A. Curriculum Vitae

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

Hideo Kojima has just quit his job at Konami. Now he is going to find a new place to work. Despite being such a well-known person, he still needs a CV to apply for a job.

During all his career Hideo has produced n games. Some of them were successful, some were not. Hideo wants to remove several of them (possibly zero) from his CV to make a better impression on employers. As a result there should be no unsuccessful game which comes right after successful one in his CV.

More formally, you are given an array $s_1, s_2, ..., s_n$ of zeros and ones. Zero corresponds to an unsuccessful game, one — to a successful one. Games are given in order they were produced, and Hideo can't swap these values. He should remove some elements from this array in such a way that no zero comes right after one.

Besides that, Hideo still wants to mention as much games in his CV as possible. Help this genius of a man determine the maximum number of games he can leave in his CV.

Input

The first line contains one integer number n ($1 \le n \le 100$).

The second line contains n space-separated integer numbers $s_1, s_2, ..., s_n$ ($0 \le s_i \le 1$). 0 corresponds to an unsuccessful game, 1 — to a successful one.

Output

Print one integer — the maximum number of games Hideo can leave in his CV so that no unsuccessful game comes after a successful one.

Examples

input
4 1 1 0 1
output
3

input
6 0 1 0 0 1 0
output
4

input
1 0
output
1