A Panda

Time limit per test
1 second
Memory limit per test
256 megabytes
Input
Standard input
Output
Standard output

Panda loves everything in cake. His favorite cake bar consists of pieces, each piece may contain a cherry. Panda wants to break the bar of cake into multiple pieces so that each part would contain exactly one cherry and any break line goes between two adjacent pieces. You are asked to calculate the number of ways Panda can do it. Two ways to break cake are considered distinct if one of them contains a break between some two adjacent pieces and the other one doesn't. Please note, that if Panda doesn't make any breaks, all the bar will form one piece and it still has to have exactly one cherry.

Input

The first line of the input contains integer n ($1 \le n \le 100$) — the number of pieces in the cake bar. The second line contains n integer's a_i ($0 \le a_i \le 1$), where 0 represents a piece without the cherry and 1 stands for a piece with the cherry.

Output

Print the number of ways to break the cake into multiple parts so that each part would contain exactly one cherry.

Examples

Input

```
3
0 1 0
```

Output

```
1
```

Input

```
5
1 0 1 0 1
```

Output

```
4
```

Note

In the first sample there is exactly one cherry, so the number of ways equals 1 -Panda shouldn't make any breaks. In the second sample you can break the cake bar in four ways:

```
10|10|1    1|010|1    10|1|01    1|01|01
```