Moving Kids

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Tien Kai the 2nd literal child has n prison cells in his basement. Being the evil child he is, he trapped some number of poor children in his prison cells. Each cell either contains a child or no child at all. Tien Kai's basement is represemted as an array a where $a_i = 1$ if the ith cell from the left contains a child and $a_i = 0$ otherwise.

One day, Tien Kai felt that the arrangement of his child prisoners was too messy and he decided to make it nicer by arranging the children in a way such that they form a **single continous block, with no free cells between any two occupied cells.**

For example, $a = [0, 0, 1, 1, 1, 0]$ is a valid arrangement but $a = [0, 0, 1, 1, 0, 1]$ is not as there is a 0 between two 1s.

To achieve this, Tien Kai can perform the following operation any number of times (possibly zero): choose an occupied cell and magically move the child to the **closest free cell to the left**. He can choose any occupied cell that you want, provided that there is at least one free cell to the left of it. When you move the child, the cell where it was held at before the operation becomes free.

Since moving kids is tiring, Tien Kai asks you to find the **minimum** number of operations he can possibly perform to make achieve his arrangement desire.

Input

1st line of input contains a single integer n.

2nd line of input contains n space separated integers, the ith integer being a_i.

Output

Print a single integer, the minimum number of operations for Tien Kai to arrange the children.

Scoring

- $1 \leq n \leq 2 * 10^5$
- $0 \leq a_i \leq 1$
- At least 1 cell will be occupied. i.e. there exists an index i such that $a_i = 1$

Subtasks	Points	Additonal Constraints
1	5	$n = 1$
2	20	$n \leq 10$
3	30	There are at most 2 indices i such that $a_i = 1$
4	45	—
5	0	Sample Testcases

Examples

standard input	standard output
8 0 1 1 1 0 1 1 0	1
6 0 1 0 0 0 0	0
5 1 0 1 0 1	2
9 0 1 1 0 0 0 1 1 0	3

Note

For sample testcase 1, Tien Kai can use 1 operation to move the rightmost child (in cell 7) to its closest unoccupied cell which is cell 5.

The new arrangement becomes $[0, 1, 1, 1, 1, 1, 0, 0]$, achieving Tien Kai's desires in 1 operation, which is the minimum possible.