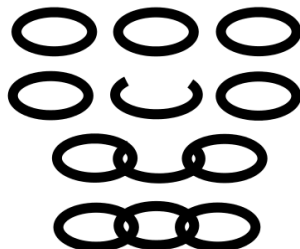


Mirko has found N chains in his attic. Each chain consists of some number of links, where each link has at most two adjacent links. Each link can be opened or closed, so it is possible to separate chains or connect them into a longer chain. Mirko would like to connect all chains into one huge chain, while **opening and closing as few links as possible**.

For example, if Mirko has only three chains, each consisting of only one link, he can open one of them, use it to connect the remaining two and close it:



Given the number of chains and the length of each chain, find the minimum number of links that Mirko has to open and close in order to bind them all in ~~darkness~~ one long chain.

INPUT

The first line of input contains the positive integer N ($2 \leq N \leq 500\,000$), the number of chains.

The second line of input contains N positive integers L_i ($1 \leq L_i \leq 1\,000\,000$), the lengths of individual chains.

OUTPUT

The first and only line of output must contain the required minimum number of links.

SAMPLE TESTS

input 2 3 3	input 3 1 1 1	input 5 4 3 5 7 9
output 1	output 1	output 3

Clarification of the first example: Mirko can open the last link of the first chain, connect it with the first link of the second chain and close it.

Clarification of the third example: Here it is best to completely take apart the chain of length 3, using its three links to connect the remaining chains.