Add To Even (Part A)

You are given a list of n positive integers $a_1, a_2, ..., a_n$

Output the number of unique pairs of integers in the list such that that they add to an even number

NOTE: Two pairs are unique to each other if and only if at least one of the indices of the numbers of the first pair is different to the second pair.

Input

Your first line will contain a single integer n

Your second line will contain n space-separated integers representing $a_1, a_2, ..., a_n$

$2 \leq n \leq 100,000$

Output

Your first and only line of output should contain a single integer representing the number of unique pairs of integers with the even sum.

Example

Input 1
3
1 1 1
Output 1
3
Input 2
6
2 12 3 14 29 4
Output 2
7