

Count em All

ZPRAC-16-17-Lab5

[25 points]

Given an array A of N integers, find the number of index pairs (i, j) , $i < j$ satisfying the following property:

$$|A[i] - A[j]| < (j - i)$$

Input Format:

First line contains N , the size of the array A .

Second line contains N space separated integers, the elements of A .

Constraints:

$$1 \leq N \leq 1000$$

$$-10000 \leq A[i] \leq 10000$$

Output Format:

Print the number of index pairs (i, j) , $i < j$ satisfying the inequality: $|A[i] - A[j]| < (j - i)$

Examples:

Input:

3

3 1 2

Output:

1

Explanation:

$$|A[0] - A[1]| = 2 > (1 - 0) ? \text{No}$$

$$|A[0] - A[2]| = 1 < (2 - 0) ? \text{Yes}$$

$$|A[1] - A[2]| = 1 == (2 - 1) ? \text{No}$$

Input:

4

3 5 3 5

Output:

3