



Problem 1. Array Inversion

Time Limit : 1 second
Memory Limit : 64 megabytes

Description

All of you perhaps know about the inverse number of array.

The inverse number of array $\{a_1, a_2, \dots, a_n\}$ is defined as the number of (i, j) such that satisfies $a_i > a_j$. (where $i < j$.)

Now Han Min, an interesting boy, is thinking about the new inverse number of array.

If the parity of i and j is the same and $a_i > a_j$ then he thinks that (i, j) is the inverse pair. And if the parity is different and $a_i < a_j$ then he also think (i, j) is the inverse pair.

In other words, an index pair (i, j) is an inverse pair when the parity of i and j is the same, $a_i > a_j$, else $a_i < a_j$.

You, Student Han's best friend, are hired to calculate the number of inverse pairs of array. Can you solve it?

Input

The first line of input file contains one integer $(T1 \leq T \leq 5)$ - indicating the number of test cases.

The first line of each test case contains one integer $N (1 \leq N \leq 5000)$ - indicating the length of array.

The next line of each case contains N real numbers separated by only one space.

Output

You must print one integer - the new inverse number of array.

Sample Input



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5

1 4 3 2 5

Sample Output

5