

Round 2 2014

[A. Data Packing](#)**B. Up and Down**[C. Don't Break The Nile](#)[D. Trie Sharding](#)[Contest Analysis](#)[Questions asked](#)

Submissions

Data Packing

5pt	Not attempted 2522/2552 users correct (99%)
8pt	Not attempted 2454/2525 users correct (97%)

Up and Down

7pt	Not attempted 1728/2380 users correct (73%)
11pt	Not attempted 1351/1426 users correct (95%)

Don't Break The Nile

10pt	Not attempted 685/1167 users correct (59%)
20pt	Not attempted 221/287 users correct (77%)

Trie Sharding

9pt	Not attempted 1408/1533 users correct (92%)
30pt	Not attempted 78/115 users correct (68%)

Top Scores

Gennady.Korotkevich	100
yeputons	100
squark	100
wata	100
rng..58	100
PavelKunyavskiy	100
ecnerwala	100
winger	100
WJMZBMR	100
eatmore	100

Problem B. Up and Down

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the [Quick-Start Guide](#) to get started.

Small input
7 points

Solve B-small

Large input
11 points

Solve B-large

Problem

You are given a sequence of distinct integers $A = [A_1, A_2, \dots, A_N]$, and would like to rearrange it into an *up and down* sequence (one where $A_1 < A_2 < \dots < A_m > A_{m+1} > \dots > A_N$ for some index m , with m between 1 and N inclusive).

The rearrangement is accomplished by swapping two *adjacent* elements of the sequence at a time. Predictably, you are particularly interested in the minimum number of such swaps needed to reach an *up and down* sequence.

Input

The first line of the input gives the number of test cases, T . T test cases follow. Each test case begins with a line containing a single integer: N . The next line contains N *distinct* integers: A_1, \dots, A_N .

Output

For each test case, output one line containing "Case #x: y", where x is the test case number (starting from 1) and y is the minimum number of swaps required to rearrange A into an *up and down* sequence.

Limits

$1 \leq T \leq 100$.
 $1 \leq A_i \leq 10^9$
 The A_i will be pairwise distinct.

Small dataset

$1 \leq N \leq 10$.

Large dataset

$1 \leq N \leq 1000$.

Sample

Input	Output
2	Case #1: 0
3	Case #2: 1
1 2 3	
5	
1 8 10 3 7	

In the first case, the sequence is already in the desired form (with $m=N=3$) so no swaps are required.

In the second case, swapping 3 and 7 produces an *up and down* sequence (with $m=3$).

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