



## Problem C

### Naomi with Array

Now Naomi is facing another math problem.

Naomi has a sequence with  $n$  different non-negative integers. She wants to make the array with descending order through some operations. An available operation with chosen integers  $i, j$  moves the number at the position  $i$  to the position  $j$  and costs  $i+j$  coins.

Specifically, if she moves the number at the position  $i$  to the position  $j$ , and meanwhile,

(1). if  $i < j$ , she moves  $A[i+1], A[i+2], \dots, A[j]$  to  $A[i], A[i+1], \dots, A[j-1]$  one by one;

(2). if  $i > j$ , she moves  $A[j], A[j+1], \dots, A[i-1]$  to  $A[j+1], A[j+2], \dots, A[i]$  one by one.

Naomi wants to minimize the coins required for all operations.

That's not enough. She also wants to know the least number of operations demanded to acquire the minimum cost.

#### Input

The input contains several test cases which is no more than 10.

In each test case, the first line contains an integer  $n$  ( $1 \leq n \leq 1000$ ) described above.

The second line contains  $n$  integers indicating the sequence  $A$ . All numbers in  $A$  are less than  $10^8$ .

#### Output

For each test case, print the minimum number of coins in total and the minimum number of operations required in a single line, separated by a single blank.

#### Sample Input

```
5
10 13 4 8 7
```

#### Sample Output

```
11 2
```