

# Silly Sort

Your younger brother has an assignment and needs some help. His teacher gave him a sequence of numbers to be sorted in ascending order. During the sorting process, the places of two numbers can be interchanged. Each interchange has a cost, which is the sum of the two numbers involved.

You must write a program that determines the minimal cost to sort the sequence of numbers.

## Input

The input file contains several test cases. Each test case consists of two lines. The first line contains a single integer  $n$  ( $n > 1$ ), representing the number of items to be sorted. The second line contains  $n$  different integers (each positive and less than 1000), which are the numbers to be sorted.

The input is terminated by a zero on a line by itself.

## Output

For each test case, the output is a single line containing the test case number and the minimal cost of sorting the numbers in the test case.

Place a blank line after the output of each test case.

## Example

### Input:

```
3
3 2 1
4
8 1 2 4
5
1 8 9 7 6
6
8 4 5 3 2 7
0
```

### Output:

```
Case 1: 4

Case 2: 17

Case 3: 41

Case 4: 34
```