

## Greater New York Programming Contest

St. Joseph's College Patchogue, NY



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## **B** • Islands in the Data Stream

Given a sequence of integers a1, a2, a3, ..., an, an island in the sequence is a contiguous subsequence for which each element is greater than the elements immediately before and after the subsequence. In the examples below, each island in the sequence has a bracket below it. The bracket for an island contained within another island is below the bracket of the containing island.

Write a program that takes as input a sequence of **12** non-negative integers and outputs the number of islands in the sequence.

## Input

The first line of input contains a single integer P, (1  $\leq P \leq$  1000), which is the number of data sets that follow. Each data set should be processed identically and independently.

Each data set consists of a single line of input. It contains the data set number, *K*, followed by **12** non-negative integers separated by a single space. The first and last integers in the sequence will be 0.

## **Output**

For each data set there is one line of output. The single output line consists of the data set number, K, followed by a single space followed by the number of islands in the sequence.

Sample Input	Sample Output
4	1 4
1 0 0 1 1 2 2 1 1 0 1 2 0	2 8
2 0 1 2 4 3 1 3 4 5 2 1 0	3 6
3 0 1 2 4 4 1 0 2 4 1 0 0	4 10
4 0 1 2 3 4 5 6 7 8 9 10 0	