

# ISLANDS IN THE DATA STREAM

Given a sequence of integers  $a_1, a_2, a_3, \dots, a_n$ , 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 **15** non negative integers, in which each integer differs from the previous integer by at most **1**, 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 **15** non negative integers separated by a single space. The first and last integers in the sequence will be 0. Each integer will differ from the previous integer by at most 1.

## 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.

## Examples

Nº	stdin	stdout
1	4	1 4
	1 0 0 1 1 2 2 1 1 0 1 2 2 1 1 0	2 7
	2 0 1 2 3 4 3 2 1 2 3 4 3 2 1 0	3 7
	3 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0	4 7
	4 0 1 2 3 4 5 6 7 6 5 4 3 2 1 0	