

PROBLEM STATEMENT

Li has planned a bike tour through the mountains of Switzerland. His tour consists of N checkpoints, numbered from 1 to N in the order he will visit them. The i -th checkpoint has a height of H_i .

A checkpoint is a peak if:

It is not the 1st checkpoint or the N -th checkpoint, and

The height of the checkpoint is strictly greater than the checkpoint immediately before it and the checkpoint immediately after it.

Please help Li find out the number of peaks.

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 the integer N . The second line contains N integers. The i -th integer is H_i .

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 number of peaks in Li's bike tour.

Limits

Time limit: 10 seconds.

Memory limit: 1 GB.

$1 \leq T \leq 100$.

$1 \leq H_i \leq 100$.

Test Set 1

$3 \leq N \leq 5$.

Test Set 2

$3 \leq N \leq 100$.

Sample Input:

4

3

10 20 14

4

7 7 7 7

5

10 90 20 90 10

3

10 3 10

Sample Output:

Case #1: 1

Case #2: 0

Case #3: 2

Case #4: 0

In sample case #1, the 2nd checkpoint is a peak.

In sample case #2, there are no peaks.

In sample case #3, the 2nd and 4th checkpoint are peaks.

In sample case #4, there are no peaks.