Uphill and Downhill X22657_en

We have the altitude data recorded by a watch during a walk. The clock registers, at each unit of time, the height in meters above sea level. Write a program such that, given the sequence of altitudes, calculates the following three values:

- The cumulative positive slope. That is, the accumulated height gains on the walk.
- The cumulative negative slope. That is, the accumulated loss of height on the walk.
- The highest cumulative slope in an uphill section. An uphill section is characterized by not having any elevation loss.

For example, given the sequence of heights 1 2 2 4 3 5 4, the cumulative positive slope is 5, the cumulative negative slope is 2, and the highest cumulative slope in an uphill section is 3.
Exam score: 4 **Automatic part:** 40%

Input

On entry there is a non-negative integer n followed by a series of n cases. Each case consists of a sequence of heights. Each height is a nonnegative integer. Right after the sequence appears the -1 mark.

Output

For each case, a line with the cumulative positive slope, the cumulative negative slope, and the highest cumulative slope in an uphill section.

Sample input 1

```
6
1 2 2 4 3 5 4 -1
100 99 98 99 100 100 100 101 95 94 95 -1
430 435 440 425 437 450 -1
100 -1
10 20 30 10 20 20 30 33 25 10 -1
15 15 14 13 12 10 -1
```

Sample output 1

```
5 2 3
4 9 3
35 15 25
0 0 0
43 43 23
0 5 0
```

Problem information

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