The Maximum Subarray

We define subsequence as any subset of an array. We define a subarray as a contiguous subsequence in an array.

Given an array, find the maximum possible sum among:

1. all nonempty subarrays.
2. all nonempty subsequences.

Print the two values as space-separated integers on one line.

Note that empty subarrays/subsequences should not be considered.

For example, given an array \( arr = [-1, 2, 3, -4, 5, 10] \), the maximum subarray sum is comprised of element indices \([1 \ldots 5]\) and the sum is \( 2 + 3 + -4 + 5 + 10 = 16 \). The maximum subsequence sum is comprised of element indices \([1, 2, 4, 5]\) and the sum is \( 2 + 3 + 5 + 10 = 20 \).

Function Description

Complete the `maxSubarray` function in the editor below. It should return an array of two integers: the maximum subarray sum and the maximum subsequence sum of \( arr \).

`maxSubarray` has the following parameter(s):

- \( arr \): an array of integers

Input Format

The first line of input contains a single integer \( t \), the number of test cases.

The first line of each test case contains a single integer \( n \).

The second line contains \( n \) space-separated integers \( arr[i] \) where \( 0 \leq i < n \).

Constraints

- \( 1 \leq t \leq 10 \)
- \( 1 \leq n \leq 10^6 \)
- \( -10^4 \leq a[i] \leq 10^4 \)

The subarray and subsequences you consider should have at least one element.

Output Format

Print two space-separated integers denoting the maximum sums of nonempty subarrays and nonempty subsequences, respectively.

Sample Input 0

```
2
4
1 2 3 4
6
2 -1 2 3 4 -5
```

Sample Output 0

```
16
20
```
Explanation 0

In the first case: The maximum sum for both types of subsequences is just the sum of all the elements since they are all positive.

In the second case: The subarray $[2, -1, 2, 3, 4]$ is the subarray with the maximum sum, and $[2, 2, 3, 4]$ is the subsequence with the maximum sum.

Sample Input 1

```
1
5
-2 -3 -1 -4 -6
```

Sample Output 1

```
-1 -1
```

Explanation 1

Since all of the numbers are negative, both the maximum subarray and maximum subsequence sums are made up of one element, $-1$. 