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 inidices $[1 - 5]$ 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

- $1 \leq t \leq 10$
- $1 \leq n \leq 10^5$
- $-10^4 \leq arr[i] \leq 10^4$

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

```
10 10
10 11
```

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.