

The Maximum Subarray

Given an array $A = [a_0, a_1, a_2, \dots, a_{N-1}]$ of N elements, find the maximum possible sum among

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

We define a *subarray* as a *contiguous subsequence*. Note that empty subarrays/subsequences should not be considered.

Input Format

The first line of input contains a single integer T denoting 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 a_0, a_1, \dots, a_{N-1} denoting the elements of A .

Constraints

- $1 \leq T \leq 10$
- $1 \leq N \leq 10^5$
- $-10^4 \leq a_i \leq 10^4$

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

```
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.