

Kadane's Algorithm

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Problems

Given an array **arr** of **N** integers. Find the contiguous sub-array with maximum sum.

Input:

The first line of input contains an integer **T** denoting the number of test cases. The description of **T** test cases follows. The first line of each test case contains a single integer **N** denoting the size of array. The second line contains **N** space-separated integers **A₁, A₂, ..., A_N** denoting the elements of the array.

Output:

Print the maximum sum of the contiguous sub-array in a separate line for each test case.

Constraints:

$$1 \leq T \leq 110$$

$$1 \leq N \leq 10^6$$

$$-10^7 \leq A[i] \leq 10^7$$

Example:**Input**

2

5

1 2 3 -2 5

4

-1 -2 -3 -4

Output

9

-1

Explanation:

Testcase 1: Max subarray sum is 9 of elements (1, 2, 3, -2, 5) which is a contiguous subarray.

**** For More Input/Output Examples Use 'Expected Output' option ****

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