# Problem F. Negatives and Positives

**Time limit** 2000 ms
**Mem limit** 262144 kB

Given an array $a$ consisting of $n$ elements, find the maximum possible sum the array can have after performing the following operation **any number of times**:

- Choose $2$ **adjacent** elements and flip both of their signs. In other words choose an index $i$ such that $1 \leq i \leq n-1$ and assign $a_i = -a_i$ and $a_{i+1} = -a_{i+1}$.

## Input

The input consists of multiple test cases. The first line contains an integer $t$ ($1 \leq t \leq 1000$) — the number of test cases. The descriptions of the test cases follow.

The first line of each test case contains an integer $n$ ($2 \leq n \leq 2 \cdot 10^5$) — the length of the array.

The following line contains $n$ space-separated integers $a_1, a_2, \ldots, a_n$ ($-10^9 \leq a_i \leq 10^9$).

It is guaranteed that the sum of $n$ over all test cases does not exceed $2 \cdot 10^5$.

## Output

For each test case, output the maximum possible sum the array can have after performing the described operation any number of times.

## Examples

| Input | Output |
| --- | --- |
| 5<br>3<br>-1 -1 -1<br>5<br>1 5 -5 0 2<br>3<br>1 2 3<br>6<br>-1 10 9 8 7 6<br>2<br>-1 -1 | 1<br>13<br>6<br>39<br>2 |

## Note

For the first test case, by performing the operation on the first two elements, we can change the array from $[-1, -1, -1]$ to $[1, 1, -1]$, and it can be proven this array obtains the maximum possible sum which is $1 + 1 + (-1) = 1$.

For the second test case, by performing the operation on $-5$ and $0$, we change the array from $[1, 5, -5, 0, 2]$ to $[1, 5, -(-5), -0, 2] = [1, 5, 5, 0, 2]$, which has the maximum sum since all elements are non-negative. So, the answer is $1 + 5 + 5 + 0 + 2 = 13$.

For the third test case, the array already contains only positive numbers, so performing operations is unnecessary. The answer is just the sum of the whole array, which is $1 + 2 + 3 = 6$.