Maximum Value Of Set

Input file:	`subset.in`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Mouhanad loves data structure and has decided to make a test for his students.

He has given his students an array with N integers and asked them to choose a subset from these integers with a size greater than or equal to one so that the value of the set is the maximum possible.

The value of a set is:

(Sum all elements in the set) - (the maximum element in the set - the minimum element in the set)

Help Mouhanad's students to find a set with the maximum value possible.

Input

The first line contains a single integer T ($1 \leq T \leq 100$), the number of test cases.

Each test case contains a single integer N ($1 \leq N \leq 10^5$), the number of elements in the array.

The next line contains N integer numbers $A_1, A_2, ..., A_N$ ($1 \leq A_i \leq 10^9$), the elements of the array.

It is guaranteed that sum of N over all test cases does not exceed 10^5

Output

For each test case, print a single integer that denotes the value of the chosen set.

Example

subset.in	standard output
2 6 1 10 2 11 3 12 1 10	31 10

Note

In the first test case:

If you choose this set $[10, 11, 12]$, the value will be $(10 + 11 + 12) - (12 - 10)$. You can't choose another set with a value greater than 31, so the answer is 31.