Problem D. Dumb Problem

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	1024 mebibytes

You are given an integer sequence of length n: $a_1, a_2, \ldots, a_n$. You can perform the following operation exactly once:

- Choose a permutation $p_1, p_2, \ldots, p_n$ of $1, 2, \ldots, n$.
- Then, for i from 1 to n in the natural order, execute:

$$a_{p_i} \leftarrow a_{p_i} + a_{p_i-1} + a_{p_i+1},$$

where $a_0 = 0$ and $a_{n+1} = 0$.

Your goal is to maximize the sum of all elements in the sequence after the operation is completed.

Input

The first line contains a single integer t ($1 \le t \le 10^4$), the number of test cases. For each test case:

The first line contains an integer n ($1 \le n \le 2 \cdot 10^5$).

The second line contains n integers $a_1, a_2, \ldots, a_n$ ($-10^8 \le a_i \le 10^8$).

The sum of n does not exceed $2 \cdot 10^5$.

Output

For each test case, output a single line with an integer representing the maximum possible sum of all elements in the sequence after performing the operation.

Example

standard input	*standard output*
4 3 1 2 3 4 -1 3 7 6 5 4 1 0 5 2 6 4 -3 7 5 -9 3	22 85 72 79