Problem B. MST

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	256 mebibytes

You are given an array $x_1, x_2, \ldots, x_n$.

Let's create an undirected graph on n vertices, which is initially empty.

After that, for each pair (u, v) such that $u < v$ let's add to the graph edge between vertices u and v with weight $x_v - x_u$.

Your goal is to find the weight of the minimum spanning tree in this graph.

Input

The first line of input contains one integer t ($1 \le t \le 300\,000$): the number of test cases.

The first line of each test case contains one integer n ($1 \le n \le 300\,000$): the number of integers in the given array.

The next line of each testcase contains n space-separated integers $x_1, x_2, \ldots, x_n$ ($-300\,000 \le x_i \le 300\,000$): the given array.

It is guaranteed that the sum of n is at most $300\,000$.

Output

For each test case one integer: the weight of the minimum spanning tree in the described graph.

Example

standard input	standard output
2 5 1 2 3 4 5 3 10 45 10	4 -35