# Nearest smaller

(Time Limit: 1 second)

**Problem Description**

For a sequence A[i], 1<=i<=n, define f(i)=A[i]-A[j], where j<i is the maximum index such that A[j]<A[i]; and f(i)=0 if j does not exist. This task asks to compute the total sum of all f(i).

**Technical Specification**

* + The number of test cases is at most 10.
  + n<=200000.
  + Each A[i] is a 31-bit nonnegative integer.

**Input Format**

The test file contains several test cases. The first line of a test case is n, and the second line contains the n integers. The case of n=0 indicates the end of input, and you do not need to process it.

**Output Format**

For each test case, output the result in one line.

**Example**

|  |  |
| --- | --- |
| **Sample Input:** | **Sample Output:** |
| 5  6 7 1 2 4  0 | 4 |