PROBLEM #3:

Pennies

Description:

Before the era of electronic transactions, it was customary for stores to have a "Penny-jar" next to the counter in which customers could take a penny if they needed it to complete their cash transaction, or leave a penny if they got some after their cash transaction.
Given a record of the pennies taken or left in the jar. what is the largest total gain in pennies during a span of consecutive transactions.
For example, if the record looks like this:
(positive numbers indicate people leaving pennies, negative numbers people taking pennies)

Transaction 1: -3
Transaction 2: 4
Transaction 3: 9
Transaction 4: -2
Transaction 5: -5
Transaction 6: 8

Their maximum gain in pennies over any span would be 14, from transaction 2 to 6

Input:

There will be several test cases in the input. Each test case will begin with an integer **N** (**1 ≤ N ≤ 250,000**) on its own line, indicating the number of transactions. On each of the next **N** lines will be a single integer **P** (**-1000 ≤ P ≤ 1000**), indicating the pennies taken or left. The transactions are specified in order. The input will end with a line with a single **0**.

Output:

For each test case, output a single integer, representing the maximum gain over any non-empty span of time. Print each integer on its own line with no spaces. Do not print any blank lines between answers.

Sample:

(Shading is used to highlight the different test cases)

Input	Output
6 -3 4 9 -2 -5 8 2 -1000 -19 0	14 -19