Climb
1 second, 32 MB

You are walking along a road in the mountain. There are N stops on this road. The height of each stop i is H_i, for $1<=i<=N$. The starting point is at height 0, and you can think of this height as $H_0 = 0$. For each stop i, if the height $H_i > H_{i-1}$, you have to climb *up* the mountain, so it takes some energy from you. Also, climbing up for consecutive stops makes you tired so it takes more energy. Thus, the energy for moving from the (i-1)-th stop to the i-th stop is

$$H_i - H_{i-1} + M,$$

where M is the number of consecutive stops that you have to *climb up* before reaching the (i-1)-th stop. It does not take any energy to climb down.

Consider the following example. Suppose that there are 10 stops with the following heights. You can compute the total energy needed as in the following table.

i	0	1	2	3	4	5	6	7	8	9	10
H_i	0	5	7	7	10	5	3	10	15	18	4
$H_i - H_{i-1}$		5	2	0	3	-5	-2	7	5	3	-14
M		0	1		0			0	1	2	
Energy		5	3		3			7	6	5	

The total energy needed is 5+3+3+7+6+5=29 units. (Note that it only takes energy to climb *strictly* up, as shown in the green cells. You should pay attention on how M for each stop is computed)

Input
The first line contains an integer N ($1<=N<=1,000$). The next N lines contain the heights. More specifically, line $1+i$ contains an integer H_i ($0 <= H_i <= 10,000$).

Output
You program should output the total energy needed to reach the last stop.

Example

Input	Output
10 5 7 7 10 5 3 10 15 18 4	29

Note: the height of the starting point H_0 is always 0.