Mountain Jump

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

It's vacation time for John! To recover his energy, he decided to climb some mountains on I.C.M.C. (Iconical Chilean Mountain Chain).

The chain contains n mountains, labeled from 1 to n. John is not interested in visiting every mountain - he just wants to start on the first mountain and reach the last one, performing some jumps.

Each mountain i has a height h_i. If John is currently on mountain i, he can choose one of the following:

- If $i + 1 \leq n$, he can jump from mountain i to $i + 1$, using $|h_i - h_{i+1}|$ units of energy;
- If $i + 2 \leq n$, he can jump from mountain i to $i + 2$, using $|h_i - h_{i+2}|$ units of energy (skipping mountain $i + 1$).

As John is on vacation, he doesn't want to waste more energy than enough to experience the path from mountains 1 to n. What is the minimum required energy to perform his journey?

Input

The first line contains n ($1 \leq n \leq 10^5$), the number of mountains.

The second line contains n integers h_i ($1 \leq h_i \leq 10^4$), the height of the mountains.

Output

Print the minimum possible total energy cost incurred.

Examples

standard input	standard output
4 10 30 40 20	30
2 10 10	0
6 30 10 60 10 60 50	40

Note

In the first test case, John will do the following path: $1 \to 2 \to 4$, and the cost is: $|10-30|+|30-20| = 30$.

In the second case, the path is $1 \to 2$ and the cost is $|10 - 10| = 0$.

The path for the third case is $1 \to 3 \to 5 \to 6$.