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Sherlock and Cost



by darkshadows

Problem

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Array A contains the elements, A_1, A_2, \dots, A_N . And array B contains the elements, B_1, B_2, \dots, B_N . There is a relationship between A_i and B_i , $\forall 1 \leq i \leq N$, i.e., any element A_i lies between 1 and B_i .

Let the cost S of an array A be defined as:

$$S = \sum_{i=2}^N |A_i - A_{i-1}|$$

You have to print the largest possible value of S .

Input Format

The first line contains, T , the number of test cases. Each test case contains an integer, N , in first line. The second line of each test case contains N integers that denote the array B .

Constraints

$$1 \leq T \leq 20$$

$$1 \leq N \leq 10^5$$

$$1 \leq B_i \leq 100$$

Output Format

For each test case, print the required answer in one line.

Sample Input

```
1
5
10 1 10 1 10
```

Sample Output

```
36
```

Explanation

The maximum value occurs when $A_1 = A_3 = A_5 = 10$ and $A_2 = A_4 = 1$.

[f](#) [t](#) [in](#)

Submissions: 3655

Max Score: 50

Difficulty: Medium

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