



# Sherlock and Cost

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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  $A_2=A_4=1$ .

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Max Score: 50

Difficulty: Medium

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```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 public class Solution {
8     public static void main(String args[] ) throws Exception {
9         /* Enter your code here. Read input from STDIN. Print output to STDOUT */
10    }
11 }
12
```

Line: 1 Col: 1

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