

# Sherlock and Cost



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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  $A_2=A_4=1$ .