



Counting Mistakes

by nabila_ahmed

Problem

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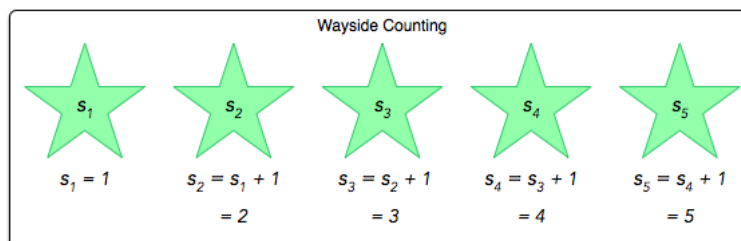
Sam goes to [Wayside School](#), where they teach counting according to the following rules:

1. Always start counting at **1**.
2. Each subsequent counted item is assigned the value of **1** more than the previously counted item.

Consider $n = 5$ stars:

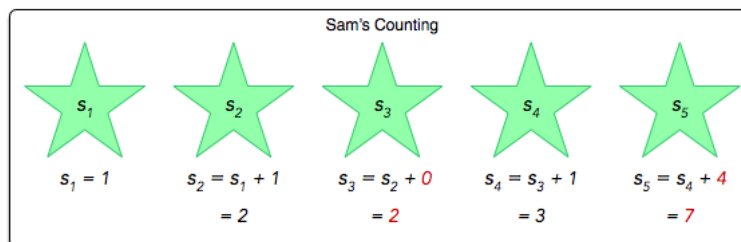


Using Wayside's method of counting, we count the stars like so:



Observe that the number assigned to a star during counting is always **1** more than the number assigned to the previously counted star. This means that if one star is incorrectly numbered during counting, the number assigned to star s_i is considered to be *correct* as long as $s_i = s_{i-1} + 1$.

If a student doesn't make any mistakes, Wayside School's counting looks just like regular counting; however, Sam tends to make a lot of mistakes. For example, he counted the above stars like this:



In the diagram above, Sam made the following two counting mistakes:

1. He added **0** (instead of **1**) to s_2 when counting star s_3 .
2. He added **4** (instead of **1**) to s_4 when counting star s_5 .

Note that Sam's count of star s_4 is *correct* because he counted s_4 as **1** more than s_3 (even though he counted s_3 incorrectly).

Sam's teacher wants your help determining how many mistakes he makes when counting n stars. Given the value of n and Sam's count sequence for n stars, find and print the number of mistakes he made *according to Wayside counting*.

Input Format

The first line contains an integer, n , denoting the number of stars Sam counts.

The second line contains n space-separated integers describing the respective values Sam counted for s_1, s_2, \dots, s_n .

Constraints

- $1 \leq n \leq 10^3$
- $1 \leq s_i \leq 10^3$

Output Format

Print a single integer denoting the number of mistakes Sam made using Wayside counting.

Sample Input 0

```
4
3 4 7 7
```

Sample Output 0

```
3
```

Explanation 0

Sam makes the following three mistakes:

1. He started counting s_1 at **3** instead of **1**.
2. He added **3** (instead of **1**) to s_2 when counting star s_3 .
3. He added **0** (instead of **1**) to s_3 when counting star s_4 .

Thus, we print **3** as our answer.

Sample Input 1

```
5
1 3 2 3 4
```

Sample Output 1

```
2
```

Explanation 1

Sam makes the following two mistakes:

1. He added **2** (instead of **1**) to s_1 when counting star s_2 .
2. He added **-1** (instead of **1**) to s_2 when counting star s_3 .

Thus, we print **2** as our answer.

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Contest ends in **19 hours**

Submissions: 2068



Max Score: 10

Difficulty: Easy

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Python 2



```
1 #!/bin/python
2
3 import sys
4
5
6 n = int(raw_input().strip())
7
```

Line: 1 Col: 1

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