**Total distance travelled in an array**

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An array A will be given. The array A consists of a permutation of the set  {1, 2, 3, … , N} for some positive integer N. You have to start at the position which has 1 in the array and then travel to the position which has 2. Then from 2, you travel to 3 and so on till you reach the position which has N. When you travel from A[i] to A[j], the distance travelled is |i– j|.Your aim is to find the total distance you have to travel to reach N when you start from 1.  
  
**Input:**  
The first line of input contains an integer T denoting the number of test cases. Then T test cases follow. The first line of each test case contains an integer N, where N is the size of the array A[ ]. The second line of each test case contains N space separated integers which denote a permutation of the set  {1, 2, 3, … , N}.  
  
**Output:**  
For each test case in a new line print out the distance travelled. 

**Constraints:**  
1 <= T <= 100  
1 <= N <= 1000

**Example :**  
**Input:**  
2  
5  
5 1 4 3 2   
6

6 5 1 2 4 3  
  
**Output :**  
7  
8

\*\*For More Examples Use Expected Output\*\*

<http://practice.geeksforgeeks.org/problems/total-distance-travelled-in-an-array/0>

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package javaapplication250;

import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

import java.util.Arrays;

import java.util.HashMap;

import java.util.HashSet;

import java.util.LinkedHashSet;

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\*/

public class JavaApplication250 {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) throws IOException {

// TODO code application logic here

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int t = Integer.parseInt(br.readLine());

while(t-- > 0) {

int n = Integer.parseInt(br.readLine());

String[] input = br.readLine().trim().split( " ");

int[] arr = new int[n];

for(int i =0; i< n; i++) {

arr[i] = Integer.parseInt(input[i]);

}

HashMap <Integer,Integer> hm = new HashMap();

for(int i =0; i<arr.length; i++) {

hm.put(arr[i], i);

}

int sum =0;

for(int i = 1; i + 1 <= n; i++) {

sum += Math.abs( hm.get(i+1) - hm.get(i));

}

System.out.println(sum);

}

}

}