

Problem B: Elevator

Reyno's little brother loves riding elevators. Whenever he enters an elevator, he mashes the buttons in some order and then waits in glee as the elevator takes him up and down the building.

More specifically, the elevator visits the floors in the order the buttons were pressed. However, if the elevator would pass a floor that it's supposed to stop on, it stops there first, then continues on it's destination.

For example, if the elevator starts on the 5th floor, and the buttons were pressed in the order:

8, 6, 4, 7

Then the elevator would first rise to floor 8, stopping at floor 6 and 7 along the way. Reaching floor 8, elevator would then descend to floor 4 because floor 6 was already visited. In total, the elevator travels for 7 floors.

Reyno and his brother just entered the elevator on the 50th floor of a 100 story building. Immediately, his brother pressed a bunch of buttons. Reyno would like to know how many floors the elevator will travel.

Input

The first line of input provides the number of test cases, **T** ($1 \leq T \leq 100$). **T** test cases follow. Each test case begins with one line containing an integer **N** ($1 \leq N < 100$). The next line contains **N** integers between 1 and 100, the floors that were pressed in the order that they were pressed.

Output:

For each test case, your program should output an integer: the total number of floors the elevator travels.

Sample Input:

```
4
4
80 60 40 70
4
70 40 80 42
4
30 70 1 100
63
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49 51 48 52 47 53 46 54 45 55 44 56 43 57 42 58 41 59 40 60 39 61
38 62 37 63 36 64 35 65 34 66 33 67 32 68 31 69 30 70 29 71 28 72
27 73 26 74 25 75 24 76 23 77 22 78 21 79 20 80 19 81 18

Sample Output:

70

90

228

2016

Explanation of Sample Input:

In the first case, the elevator goes to floor 80, stopping at 60 and 70 along the way. It then descends to 40, travelling for 70 floors in total.

In the second case, the elevator first goes to floor 70, then goes to floor 40, stopping at floor 42 along the way. It then goes back up to floor 80, for a total of 90 floors.

In the last case, the elevator alternates going up and down, travelling a total of $1 + 2 + 3 + 4 + 5 + \dots + 62 + 63 = 2016$ floors.