

Judged response for input A-large: **Correct!**

```
System.out.println("hello, world!");
```

Practice Mode

annervaz@gmail.com | [Contest scoreboard](#) | [Sign out](#)

Qualification Round 2011

A. Bot Trust[B. Magicka](#)[C. Candy Splitting](#)[D. GoroSort](#)[Contest Analysis](#)[Questions asked](#) **3**

- Submissions

Bot Trust

10pt	Not attempted 10560/12572 users correct (84%)
10pt	Not attempted 10291/10514 users correct (98%)

Magicka

10pt	Not attempted 8886/10218 users correct (87%)
15pt	Not attempted 7176/8738 users correct (82%)

Candy Splitting

10pt	Not attempted 8188/9096 users correct (90%)
15pt	Not attempted 6286/7416 users correct (85%)

GoroSort

10pt	Not attempted 2670/4609 users correct (58%)
20pt	Not attempted 2568/2649 users correct (97%)

- Top Scores

SkidanovAlexander	100
tomconerly	100
kmod	100
watashi	100
RAD.	100
Anton.Lunoyov	100
w01fe	100
jakubr	100
Weiqi	100
hos.lyric	100

Problem A. Bot Trust

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the [Quick-Start Guide](#) to get started.

Small input

10 points

Solve A-small

Judge's response for last submission: Correct.

Large input

10 points

Solve A-large

Judge's response for last submission: Correct.

Problem

Blue and Orange are friendly robots. An evil computer mastermind has locked them up in separate hallways to test them, and then possibly give them cake.

Each hallway contains 100 buttons labeled with the positive integers {1, 2, ..., 100}. Button k is always k meters from the start of the hallway, and the robots both begin at button 1. Over the period of one second, a robot can walk one meter in either direction, or it can press the button at its position once, or it can stay at its position and not press the button. To complete the test, the robots need to push a certain sequence of buttons in a certain order. Both robots know the full sequence in advance. How fast can they complete it?

For example, let's consider the following button sequence:

0 2, B 1, B 2, 0 4

Here, 0 2 means button 2 in Orange's hallway, B 1 means button 1 in Blue's hallway, and so on. The robots can push this sequence of buttons in 6 seconds using the strategy shown below:

Time	Orange	Blue
1	Move to button 2	Stay at button 1
2	Push button 2	Stay at button 1
3	Move to button 3	Push button 1
4	Move to button 4	Move to button 2
5	Stay at button 4	Push button 2
6	Push button 4	Stay at button 2

Note that Blue has to wait until Orange has completely finished pushing 0 2 before it can start pushing B 1.

Input

The first line of the input gives the number of test cases, T . T test cases follow.

Each test case consists of a single line beginning with a positive integer N , representing the number of buttons that need to be pressed. This is followed by N terms of the form " $R_i P_i$ " where R_i is a robot color (always 'O' or 'B'), and P_i is a button position.

Output

For each test case, output one line containing "Case #x: y", where x is the case number (starting from 1) and y is the minimum number of seconds required for the robots to push the given buttons, in order.

Limits

$1 \leq P_i \leq 100$ for all i .

Small dataset

 $1 \leq T \leq 20.$ $1 \leq N \leq 10.$

Large dataset

 $1 \leq T \leq 100.$ $1 \leq N \leq 100.$

Sample

Input	Output
3	Case #1: 6
4 0 2 B 1 B 2 0 4	Case #2: 100
3 0 5 0 8 B 100	Case #3: 4
2 B 2 B 1	

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