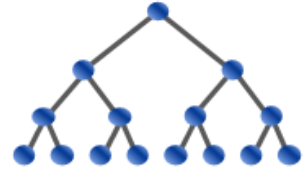


USA Computing Olympiad

[OVERVIEW](#)[TRAINING](#)[CONTESTS](#)[HISTORY](#)[STAFF](#)[RESOURCES](#)

USACO 2017 FEBRUARY CONTEST, BRONZE PROBLEM 1. WHY DID THE COW CROSS THE ROAD

[Return to Problem List](#)

Contest has ended.

Analysis mode

English (en) ▼

While the age-old question of why chickens cross roads has been addressed in great depth by the scientific community, surprisingly little has been published in the research literature on the related subject of cow crossings. Farmer John, well-aware of the importance of this issue, is thrilled when he is contacted by a local university asking for his assistance in conducting a scientific study of why cows cross roads. He eagerly volunteers to help.

As part of the study, Farmer John has been asked to document the number of times each of his cows crosses the road. He carefully logs data about his cows' locations, making a series of N observations over the course of a single day. Each observation records the ID number of a cow (an integer in the range $1 \dots 10$, since Farmer John has 10 cows), as well as which side of the road the cow is on.

Based on the data recorded by Farmer John, please help him count the total number of confirmed crossings. A confirmed crossing occurs when a consecutive sightings of a cow place it on different sides of the road.

INPUT FORMAT (file crossroad.in):

The first line of input contains the number of observations, N , a positive integer at most 100. Each of the next N lines contains one observation, and consists of a cow ID number followed by its position indicated by either zero or one (zero for one side of the road, one for the other side).

OUTPUT FORMAT (file crossroad.out):

Please compute the total number of confirmed crossings.

SAMPLE INPUT:

```
8
3 1
3 0
6 0
2 1
4 1
3 0
4 0
3 1
```

SAMPLE OUTPUT:

```
3
```

In this example, cow 3 crosses twice -- she first appears on side 1, then later appears on side 0, and then later still appears back on side 1. Cow 4 definitely crosses once. Cows 2 and 6 do not appear to cross.

Problem credits: Brian Dean

Language:

C ▼

Source File:

Choose File

No file chosen

[Submit Solution](#)

Note: Many issues (e.g., uninitialized variables, out-of-bounds memory access) can cause a program to product different output when run multiple times; if your program behaves in a manner inconsistent with the official contest results, you should probably look for one of these issues. Timing can also differ slightly from run to run, so it is possible for a program timing out in the official results to occasionally run just under the time limit in analvsis mode. and vice versa. Note also that we have recently changed aradina servers. and since our

new servers run at different speeds from the servers used during older contests, timing results for older contest problems may be slightly off until we manage to re-calibrate everything properly.
