1. Attendance: Showing Up Is 80% of Life

Program Name: Attend.java Input File: attend.dat

A school is considering giving awards to students who have good attendance and are on time. They want to look at past attendance records and determine how many awards would be given under various plans. Each plan has a maximum number of days that a student can miss, a maximum number of consecutive days a student can miss, and a maximum number of times a student can be late. Each student receives a single award or no award at all. If a student exceeds one or more of the three limits, that student does not receive an award. If a student does not exceed any of the limits, the student will receive a single award. For each set of past records and each set of rules print out the number of awards that would be given.

Input

- The first line will contain a single integer `n` that indicates the number of plans the school is considering.
- The next `n` lines will each contain 3 integers: `max con late`.
    - `max` indicates the maximum number of days a student can miss school and still get the award, where `max` will be greater than 0.
    - `con` indicates the maximum number of consecutive days a student can miss school and still get the award, where `con` will be greater than 0 and less than or equal to `max`.
    - `late` indicates the maximum number of days a student can be late and still get the award, where `late` will be greater than or equal to 0.
- After the plans will be a single integer `s` that indicates the number of sets of attendance records to test the proposed award plans.
- The first line of each attendance data set will contain two integers: `num size`.
    - `num` indicates the number of students' attendance data in this data set.
    - `size` indicates how many days are in each student's attendance data for this data set.
- The following `num` lines in the data set will each contain `size` characters. All characters will be either `O`, `A`, or `L`, where `O` indicates the student was present and on time, `A` indicates the student was absent, and `L` indicates the student was present, but late.
- The position of the character in a line corresponds to that day. In other words the first character in a line is the attendance status for the first day of school for a particular student, the second character corresponds to the attendance status for the second day of school for that same student, and so forth.

Output

- For each data set print the phrase "`Data Set m`" on a line by itself, where `m` is the number of the data set starting at 1.
- For each of the award plans print the number of awards that would be given under that plan as "`Plan x y`", where
    - `x` is the plan number. Plan numbers, starting at 1, are based on the order they appear in the input file.
    - `y` is the number of awards that would be given under this plan for the given attendance data set.

Example Input File

```
3
3 2 1
4 4 2
1 1 0
2
3 10
OOOOOOOOOO
OOOOAOOLAA
OOAAAOOOOO
4 12
OAOOAOOAOAOO
OOLLOOAAOOOO
AOOLOOOOAOOA
AAAAAAAAAAAA
```

Example Output to Screen

```
Data Set 1
Plan 1 2
Plan 2 3
Plan 3 1
Data Set 2
Plan 1 1
Plan 2 3
Plan 3 0
```