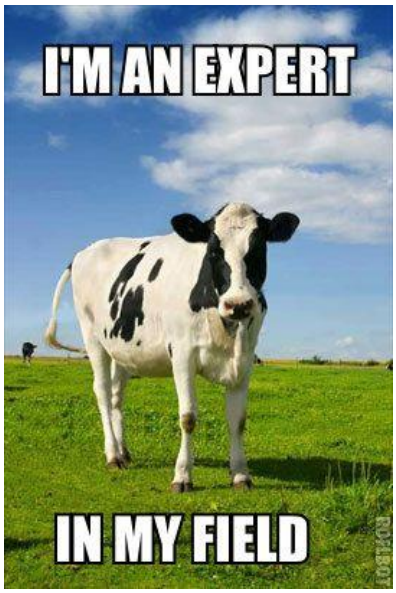
COW week 20



Some Guy wants to sell a bunch of pie with ice cream at some event. He would like to maximize his profit (duh). Guy offers several varieties of pie and ice cream and leaves it up to the customer to combine flavours freely. Of course, some combinations are disgusting and will not be sold.
Guy knows beforehand how much profit he can make from each combination of pie and ice cream and he knows of how many slices and scoops of each type he can serve. With all this information Guy would like to make a program that can calculate both the minimum and maximum expected profit. Since he isn't very bright he would like you to do it for him. For free.

Input

Input will consist of several instances of the problem at hand. Each instance will be formatted as follows (e.g.):

```
2 3                    Available types of pie and ice cream, respectively
40 50                  Available slices for each type of pie
27 30 33               Available scoops for each type of ice cream
1.11 1.27 0.70         Profit for each type of ice cream combined with pie 1
-1 2 0.34              Profit for each type of ice cream combined with pie 2
```

In the example above, the first entry in the last line is -1, which means that this particular combination is disgusting and therefore forbidden. Of course, the amount of lines after the first three will vary depending on the amount of available pie types.
Again, the input will consist of several problems. The last line of the file will consist of two zeros, like so:

```
0 0
```

You will find the input file `alamode.in` in this week's problem directory (you should know this by now but it's `I:\hs\Teams\Pelican\SGSN COW\Week 20`).

Output

For each problem, print a line containing both minimum and maximum profit, like so:

```
Problem 1: 91.70 to 105.87
```

Obviously, the problem number is incremented for each problem instance. Any deviations from this format will be harshly judged.
Lastly, any main function MUST return 0!

Submission

As per usual, submit your solution in your own directory under this week's problem directory (again, `I:\hs\Teams\Pelican\SGSN COW\Week 20`).