13037   Chocolate

Leju, Rony and Sujon are cousins and have collected L, R & S chocolates respectively. The chocolates come into different types. They have numbered each type by a distinct nonnegative integer of at most five digits.

After their chocolate collection, Rony found out something and said, "Why both of you have some types of chocolates that I don't have?" While Leju and Sujon were looking at each other for answer, Rony realised something more and said, "Oh, no worries! I have some types of chocolates that neither of you have!"

Now, you being their older cousin, they have come to you for help. You will have to find out how many types of chocolates each of the boys has while none other have that type. You will also have to find the number of types of chocolates each of the boys does not have while all the others have that type.

Input

First line of input will contain an integer T (≤ 15), the number of test cases. For each test case, there are three positive integers: L, R, S on the first line ($L, R, S \leq 10^5$). Each of next three lines will contain L, R, S integers; the type of chocolates Leju, Rony & Sujon respectively possesses.

Output

Begin output of each test case by a line 'Case #x:' where x is the case no (starting from 1). Then three lines follow, first one for Leju, second one for Rony and last one for Sujon. Each of these lines will contain 2 integers, separated by a space. First number will denote how many types of chocolates respective boy has but none other have. And, second one will denote how many chocolates both the others have but the respective boy does not.

Note: Let's review the third test case below:

Boy	All Chocolates possessed by respective boy	Chocolates which are possessed by respective boy (while none of other two boys do)	Chocolates which are **not** possessed by respective boy (while both of other two boys do)
Leju	11, 22, 33, 44, 55, 66	66	<none>
Rony	11, 22, 77, 88	77, 88	33, 44, 55
Sujon	33, 44, 55	<none>	11, 22

Sample Input

```
3
2 2 2
1 2
3 4
0 0
2 2 2
1 2
2 3
3 1
```

```
6 4 3
11 22 33 44 55 66
11 22 77 88
33 44 55
```

Sample Output

```
Case #1:
2 0
2 0
1 0
Case #2:
0 1
0 1
0 1
Case #3:
1 0
2 3
0 2
```