

“Homer no function beer well without.”

Homer Simpson

Every Friday night, Alice, Clara and Mary go to Koerner’s pub to relax after a long week. At the pub, lots of guys ask them for their phone numbers. In fact, the three ladies are so popular that they have started counting the number of times each one is asked for her phone number during one evening. On day i , Alice, Clara and Mary were asked A_i , C_i and M_i times, respectively. 100 Fridays have passed, and the records were lost, but there are 3 things Alice still remembers.

1. X of the 100 days, A_i was equal to C_i .
2. Y of the 100 days, C_i was equal to M_i .
3. Z of the 100 days, A_i was equal to M_i .

How many time were A_i , C_i and M_i all equal?

Input

The first line of input gives the number of cases, N . N test cases follow. Each one contains the integers X , Y and Z on a line.

Output

For each test case, output one line containing ‘Case # x :’ followed by ‘Between A and B times.’, where A and B are the lowest and highest number of times that A_i , C_i and M_i could have been equal.

If the situation is impossible, print ‘The records are faulty.’ instead.

Sample Input

```
5
50 50 50
100 100 99
100 50 50
101 50 50
100 100 100
```

Sample Output

```
Case #1: Between 25 and 50 times.
Case #2: The records are faulty.
Case #3: Between 50 and 50 times.
Case #4: The records are faulty.
Case #5: Between 100 and 100 times.
```