

6911 Double Swords

Last night, Kingdom of Light was attacked by Kingdom of Dark! The queen of Kingdom of Light, Queen Ar, was captured and locked inside a dark and creepy castle. The king of Kingdom of Light, King Ash, wants to save the queen.

The castle is guarded by N dragons, conveniently numbered from 1 to N . To save Queen Ar, King Ash must kill all the dragons. The kingdom's oracle said that in order to kill the i -th dragon, King Ash has to slay it with exactly two swords, one in each hand: one sword of length A_i units, and another sword of length between B_i and C_i , inclusive. King Ash can carry unlimited number of swords, and each sword can be used multiple times.

The number of blacksmiths in the kingdom is limited, so it is important to make as few swords as possible. Besides, making swords is expensive and takes much time. Determine the minimum number of swords the kingdom has to make so that King Ash can save Queen Ar!

Input

The first line of input contains an integer T ($T \leq 20$) denoting the number of cases. Each case begins with an integer N ($1 \leq N \leq 100,000$) denoting the number of dragons which have to be killed. The next N lines each contains three integers: A_i , B_i , and C_i ($1 \leq A_i \leq 1,000,000$; $1 \leq B_i \leq C_i \leq 1,000,000$) denoting the swords' length needed to kill the i -th dragon as described in the above problem statement.

Output

For each case, output 'Case # X : Y ', where X is the case number starts from 1 and Y is the minimum number of swords the kingdom has to make and carry in order to defeat all the dragons and save Queen Ar.

Explanation for 1st sample case:

The kingdom has to make two swords in order to defeat one dragon.

Explanation for 2nd sample case: All the dragons can be defeated by three swords, for example, with lengths of: 3, 6, and 15.

- The first dragon can be defeated by swords of length 3 and 6.
- The second dragon can be defeated by swords of length 6 and 15.
- The third dragon can be defeated by swords of length 3 and 15.

There also exists other combination of three swords.

Sample Input

```
4
1
7 6 8
3
3 5 10
6 11 15
3 13 15
4
```

```
1 10 20
3 50 60
2 30 40
4 70 80
2
5 100 200
150 1000 2000
```

Sample Output

```
Case #1: 2
Case #2: 3
Case #3: 8
Case #4: 3
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