Problem F: Palace

Time Limit: 1 Sec Memory Limit: 128 MB
Submit: 802 Solved: 155
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Description

To celebrate the victory of the war, Pisces has decided to build a splendid palace. The craftsmen has brought back n kinds of cube materials from the dwarf kingdom. The length, width, and height of each material are a, b and c respectively. To make the palace magnificent, the craftsmen have to stack these materials together. Material i can be stacked on material j if and only if $a_i < a_j \bigcap b_i < b_j$, or $a_i < b_j \bigcap b_i < a_j$. Pisces wants to know how high these materials can stack at most.

Input

The first line contains an integer T ($1 \le T \le 10$), which denotes the number of test cases.

For each of the test cases, the first line contains an integer n ($1 \le n \le 2 * 10^3$), which represents the number of materials. Each of the next n lines contains 3 integers a, b and c ($1 \le a, b, c \le 1000$), which represents the size of a material.

Output

For each test case, print the maximum height.

Sample Input

```
1
3
2 3 5
4 3 4
3 3 3
```

Sample Output

```
9
```

HINT

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