

British Informatics Olympiad Final

30 March – 2 April, 2000

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Town Planning — Part One

One of the challenges in town planning is designing an environment that enables inhabitants and visitors to build a strong mental picture of their surroundings. This enables people to have an image of where they are, where they are going and how to get there. Two of the fundamental ideas are *landmarks*, which are static and easily recognizable features, and *districts*, which are distinct areas within the town.

In this question you will be given a list of districts, each of which is marked out by three landmarks; in other words each district is triangular. Two districts are adjacent if (and only if) they have two landmarks in common. Your task is to give a list of adjacent districts.

The town has been carefully planned. No districts overlap, hence any pair of landmarks is shared by at most two districts and no two districts have the same three landmarks. Furthermore the town is fully connected; in other words, it is possible to get between any two districts in the town without going outside the town; hence every district must be adjacent to at least one other district (since there is more than one district).

Write a program that first inputs an integer n ($1 < n \leq 5000$), followed by n lines each containing three integers. The i^{th} of these lines lists the three distinct landmarks, each an integer between 1 and 5000 inclusive, defining district i . You should output n lines, the i^{th} line listing the districts adjacent to district i .

Sample Input

```
6
2 5 6
7 4 5
6 5 4
3 6 4
3 7 1
4 3 7
```

Sample Output

```
3
6 3
1 4 2
3 6
6
5 4 2
```