

All states of the Brazilian Federation, as well as the federal capital of the country, have representatives of the legislative, executive and judiciary powers. The employees working in these administrations are all extremely valuable and important professionals, so the first firemen will always be dispatched by helicopter. But all powers are of equal importance, and therefore it has been decided that the firemen barracks of each capital shall be at equal distance from the siege of each of the three powers.

You are commissioned by the Chief Commander of Firemen in Brazil to write a program that determines the best possible location to erect the new firemen buildings, so that it is at the exact same distance from all three powers.

Input

The input consists of an integer N , followed by N lines, each containing the locations of the three powers in a different city. The coordinates of each location is a pair of floating point numbers with the precision up to one-tenth. So each line will be comprised of six such numbers.

Output

For each given configuration, the output will echo a line indicating how much possible locations there is, and if there is one possible location, multiple possible location, give it as a pair of floating point numbers with precision up to one-tenth, following the format given in the sample output. The output should not have a `'-0.0'` coordinated, so an answer `'(-0.0, 1.1)'` should be `'(0.0, 1.1)'`.

Sample Input

```
3
0.0 1.0 0.0 3.0 1.0 2.0
0.0 -1.0 0.0 3.0 0.0 2.0
0.0 -1.0 0.0 -1.0 0.0 2.0
```

Sample Output

```
The equidistant location is (0.0, 2.0).
There is no possible location.
There is an infinity of possible locations.
```