

Problem 10 : Transmitting signals

Problem

A satellite **S** is transmitting a cricket match. The signals being transmitted consist of audio streams and video streams. There is a transmitting station **T** on the earth, whose function is to catch the signals and transmit them to a receiver. Now video streams can be directly transmitted from the satellite to the receiver. However, audio streams can only reach the receiver via the transmitter. Because of this, there is a phase shift which occurs between the match and the commentary. The phase shift is proportional to the ratio of the path travelled by video streams to the path travelled by the audio streams. Find out where the receiver station should be located so that the phase shift is minimized.

Assume that the earth is a flat plane, and the receiver and the transmitter are points on the surface of the earth. The satellite is a geostationary satellite - hence its position with respect to the transmitter and the receiver always remains the same.

Input

In all input cases, earth is assumed to be the XY plane. The first line gives the number of test cases. First line of each test case gives the coordinates (x, y) of the transmitting station. Second line of a test case gives the coordinates (x_1, y_1, z_1) of the satellite. All the input numbers will be integers.

Output

For each input case, print the desired location (x, y) of the receiver station. Output the answer correct to two places of decimals (as will be obtained using the `%.21f` flag of `printf`).

Sample Input

```
3
1 2
4 8 10
-1 -10
1 2 5
1 -10
-11 -12 -17
```

Sample Output

```
6.39 12.77
1.16 2.97
-19.62 -13.44
```