Connecting three towns (variation)

Given three towns find the point for which the summary distance to all towns is minimal. Wanted are the accurate coordinates ±10^{-6}.

Input

In the first line the number T (T<100) of test cases. Then T lines with the space separated coordinates (integer 0<=x,y<=100) of the three towns.

Output

For each test case the coordinates of the above specified point.

Example

Input:
2
2 2 1 1 2 1
1 0 0 0 2 1

Output:
1.788675 1.211324
1 0