

406410114 UVA10242 Fourth Point!!

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//4 x,y
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#include <bits/stdc++.h>
struct Point{
    double x;
    double y;
};

using namespace std;
int main(){
    int i,j,k;
    Point point[4];
    while( cin >> point[0].x>>point[0].y >> point[1].x>>point[1].y
           >> point[2].x>>point[2].y >> point[3].x>>point[3].y) {
        Point vec[3] ;
        if ( point[1].x == point[3].x && point[1].y == point[3].y ){
            swap( point[3].x,point[2].x );
            swap( point[3].y,point[2].y );

        }//if

        if ( point[0].x == point[2].x && point[0].y == point[2].y ){
            swap( point[0].x,point[1].x );
            swap( point[0].y,point[1].y );

        }//if

        if ( point[0].x == point[3].x && point[0].y == point[3].y ){
            swap( point[2].x,point[3].x );
            swap( point[2].y,point[3].y );
            swap( point[0].x,point[1].x );
            swap( point[0].y,point[1].y );

        }//if

        vec[0].x = point[1].x - point[0].x;
        vec[0].y = point[1].y - point[0].y;
        vec[1].x = point[3].x - point[2].x;
        vec[1].y = point[3].y - point[2].y;

        vec[2].x = point[0].x + vec[1].x;
        vec[2].y = point[0].y + vec[1].y;

        cout << fixed << setprecision(3) <<vec[2].x << " " << vec[2].y<<endl;

    } //while

    return 0 ;
} //amin()
```