



Problem F. Triple shot

Input: Standard
Output: Standard
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The Andromedan Army has invented a new kind of weapon that shoots three lasers at the same time, but with one problem: in order to impact the enemies, the ship must be at the same distance of the three objectives. You were hired to create an algorithm that calculates the point where the ship must be positioned to do a killer shot.

Input

The input consists of several tests cases. A test case is presented on three lines, each one with a pair of integers X_i, Y_i ($-3000 \leq X_i, Y_i \leq 3000$), indicating the points in the plane where the enemies are placed. It is granted that all given points are different.

Output

Print on a single line two numbers separated by a white space, indicating the point where the shoots must be performed, or "Impossible" if there's not such point. Your answer will be considered correct if the difference respect to the exact solution is less than 10^{-6} .

Example

Input	Output
-4 0	0 0
0 4	Impossible
4 0	
1 2	
2 4	
4 8	