Problem B
Walls

Input file: *testdata.in*
Time limit: 2 second

Problem Description

Long time ago there were countries – A and B, and they had n_A and n_B people respectively. Unfortunately two countries started fighting with each other. A magician Aivina wanted to build walls to stop the war. Aivina can build magical circular walls at any location with any radius. She wanted to build two magical walls to split the people of the two countries to prevent them from fighting with each other. The walls must be built according to the following requirements.

- Two walls must not intersect.
- All people must be inside the walls.
- One wall encloses all the people of a country and one people of the other country, and the other wall encloses the other people of the other country.
- The wall should not touch any people.

Now given the positions of people of two countries, which are represented as points on a two dimensional plain, please determine whether Aivina could build the walls that satisfy all the requirements above. You may assume that the positions of any three people will not be in a straight line.

Technical Specification

- $2 \leq n_A \leq 20$
- $2 \leq n_B \leq 1000$
- $-10^4 \leq$ the coordinates $\leq 10^4$

Input Format

There are multiple test cases in the input. Each input case starts with two integers n_A, n_B. Each of the following $n_A + n_B$ lines contains two integers indicating the coordinate of people. The first n_A people belong to country A, and the others belong to country B. The test cases are separated by blank lines.

Output Format

For each test case output a line. Print 'Yes' if Aivina could build two walls that satisfy all requirements, otherwise print 'No'.

Sample Input

```
2 2
0 0
0 1
1 0
1 1

4 2
-2 -2
-2 2
2 -2
2 2
0 1
0 -1
```

Sample Output

```
Yes
No
```