Point

The axes of a two-dimensional Cartesian system divide the plane into four infinite regions, called quadrants, each bounded by two half-axes. These are often numbered from 1st to 4th: where the signs of the (x;y) coordinates are I (+;+), II (-;+), III (-;-), and IV (+;-).

Given N points. Check that there is a point after removal of which the remaining points are located at most on one side of quadrant.

Format Input
The input begins with an integer T indicating the number of test cases. In each test case, the first line contains a single positive integer N, the number of points. The following N lines contain coordinates of the points. The i-th of these lines contains two single integers x_i and y_i. No two points coincide.

Format Output
For each test case, output YES if there is such a point. Otherwise, output NO.

Constraints
1 <= T <= 100
1 <= N <= 1000
1 <= $|x_i|$, $|y_i|$ <= 1 000 000

Sample Input (standart input)	**Sample Output** (standard output)
2 4 1 1 2 2 -1 -1 -2 -2 3 -1 1 -2 2 -3 3	Case #1: NO Case #2: YES