

Problem A. Intersect Until You're Sick of It

Input file: Output file: output .txt
Time limit: 0.5 seconds
Memory limit: 64 mebibytes

Ural contests usually contain a lot of geometry problems. Many participants do not conceal their discontent with such disbalance. Still, we have decided not to break the tradition and give you an unbalanced contest. Let's start!

Consider an iterative process for a set of points on a plane. Every iteration consists of three steps:

1. Draw a line through every pair of different points.
2. Find all intersections of all pairs of different non-parallel lines.
3. Merge the initial set of points with the set of intersection points and go to step one.

After each iteration, the number of points either increases or stays the same.

You are given a set of points. Iterations repeat while the number of points increases. How many points will be in the set after the end of this iterative process?

Input

The first line contains an integer n ($1 \leq n \leq 300$). Further input describes n different points. For every point, you are given a pair of integer coordinates whose absolute value does not exceed 10^8 .

Output

If the process is infinite, print "oo" (two lowercase Latin letters 'o'), otherwise print the number of points in the set after the end of the process.

Example

input.txt	output.txt
4 0 0 0 1 1 0 1 1	5