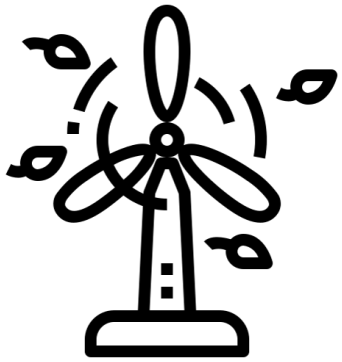
Problem H
Pivoting Points
Time limit: 10 seconds



Consider a set of points P in the plane such that no 3 points are collinear. We construct a "windmill" as follows:

Choose a point p in P and a starting direction such that the line through p in that direction does not intersect any other points in P. Draw that line.

Slowly rotate the line clockwise like a windmill about the point p as its pivot until the line intersects another point p' in P. Designate that point p' to be the new pivot (call this "promoting" the point p'), and then continue the rotation.

Continue this process until the line has rotated a full 360 degrees, returning to its original direction (it can be shown that the line will also return to its original position after a 360 degree rotation).

During this process, a given point can be promoted multiple times. Considering all possible starting pivots and orientations, find the maximum number of times that a single point can be promoted during a single 360 degree rotation of a line.

Input

The first line of the input will be a single integer n with $2 \leq n \leq 2000$. Following this will be n lines, each with two integers x_i and y_i with $-10\,000 \leq x_i, y_i \leq 10\,000$.

Output

On one line, write an integer with the largest number of times any particular point can be a pivot when an arbitrary starting line does a full rotation as described above.

Examples

Sample Input 1	Sample Output 1
3 -1 0 1 0 0 2	2

Sample Input 2	Sample Output 2
6 0 0 5 0 0 5 5 5 1 2 4 2	3