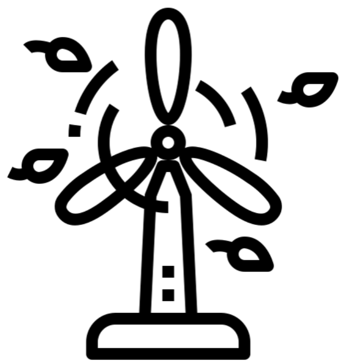
# Problem H
## Pivoting Points
### Time limit: 10 seconds



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<br>-1 0<br>1 0<br>0 2 | 2 |

| Sample Input 2 | Sample Output 2 |
|---|---|
| 6<br>0 0<br>5 0<br>0 5<br>5 5<br>1 2<br>4 2 | 3 |