Problem B
Magical Barrier

There are N power sources, numbered from 1 to N, scattered around the ICPC Kingdom. Power source i is uniquely located at coordinate (X_i, Y_i) in a 2D Cartesian plane such that there are no three power sources located in a straight line.

For each pair of distinct power sources i and j that satisfies $1 \leq i < j \leq N$, a magical barrier forms as a line segment that spans from (X_i, Y_i) to (X_j, Y_j).

You noticed a strange phenomenon. When two distinct magical barriers are intersecting, then both magical barriers are somewhat strengthened. To simplify things, you define the **strength** of a magical barrier b as the number of magical barriers other than b that intersects with b. Two distinct magical barriers are intersecting if and only if there exists exactly one point (x, y) that lies on both magical barriers while none of the N power sources are located at (x, y).

You want to find the strength of the strongest magical barrier in the ICPC Kingdom.

Input

Input begins with an integer N ($2 \leq N \leq 1000$) representing the number of power sources. Each of the next N lines contains 2 integers X_i Y_i ($-10^9 \leq X_i, Y_i \leq 10^9$) representing the location of power source i. It is guaranteed that the location of each power source is unique, and there are no three power sources located in a straight line.

Output

Output an integer in a single line representing the strength of the strongest magical barrier.

Sample Input #1

```
6
0 0
0 6
6 0
6 6
1 4
1 2
```

Sample Output #1

```
3
```

Explanation for the sample input/output #1

Let $\langle i, j \rangle$ be the magical barrier that spans from power source i to power source j.

One of the strongest magical barriers is $\langle 1, 4 \rangle$ with a strength of 3. The 3 magical barriers that intersect with $\langle 1, 4 \rangle$ are $\langle 2, 3 \rangle$, $\langle 3, 6 \rangle$, and $\langle 3, 5 \rangle$. Note that the magical barrier $\langle 2, 3 \rangle$ also has a strength of 3.

Sample Input #2

```
2
0 0
0 1
```

Sample Output #2

```
0
```

Explanation for the sample input/output #2

The only magical barrier is $\langle 1, 2 \rangle$ with a strength of 0.

Sample Input #3

```
4
-3 0
3 0
0 3
0 1
```

Sample Output #3

```
0
```

Explanation for the sample input/output #3

All magical barriers have a strength of 0.

Sample Input #4

```
4
0 0
0 1
1 0
1 1
```

Sample Output #4

```
1
```

Explanation for the sample input/output #4

The strongest magical barrier is either $\langle 1, 4 \rangle$ or $\langle 2, 3 \rangle$, which intersects each other at $(0.5, 0.5)$.