Task Geometrija

You are given n points on the plane, such that no three points lie on the same line.

We say that line segments $\overline{AB}$ and $\overline{CD}$ *cross* if they share a point X **different** from the points A, B, C and D.

Let $\mathcal{S}$ be the set of all line segments between pairs of the given points. Find the number of segments in $\mathcal{S}$ that don't cross with any other segment in $\mathcal{S}$.

Input

The first line contains an integer n ($3 \leq n \leq 1000$), the number of points.

The following n lines contain integers x_i and y_i ($-10^9 \leq x_i, y_i \leq 10^9$), the coordinates of the points.

Output

Output the requested number of segments.

Scoring

Subtask	Points	Constraints
1	20	$3 \leq n \leq 40$
2	30	$3 \leq n \leq 200$
3	60	No additional constraints.

Examples

input

```
4
1 1
-1 1
-1 -1
1 -1
```

output

```
4
```

input

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

output

```
6
```

Clarification of the examples: