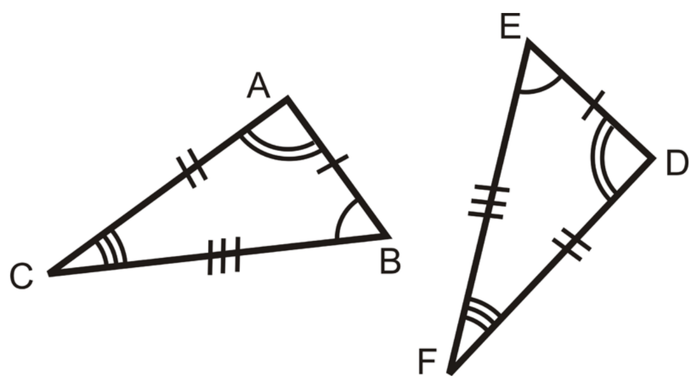
Problem C
Congruent Triangles

In geometry, two triangles are considered *congruent* iff they have exactly the same size and shape. In other words, all pairs of corresponding interior angles are equal in measure, and all pairs of corresponding sides have the same length. More formally, triangle ABC is congruent to triangle DEF, mathematically written as $\triangle ABC \cong \triangle DEF$, if and only if all six below statements are true:

- $AB = DE$
- $BC = EF$
- $CA = FD$
- $\angle ABC = \angle DEF$
- $\angle BCA = \angle EFD$
- $\angle CAB = \angle FDE$

Note that while stating congruence of triangles, the order of vertices matters. For example, by stating $\triangle ABC \cong \triangle DEF$, we means that the side AB corresponds to the side DE, the angle $\angle BCA$ corresponds to the angle $\angle EFD$,... Therefore, in the below figure, two statements $\triangle ABC \cong \triangle DEF$ and $\triangle ACB \cong \triangle DFE$ are true; while $\triangle ABC \cong \triangle FED$ is false since $AB \neq FE$.



In this problem, you are given n points on the Cartesian plane, denoted as $P_1, P_2, \ldots, P_n$. The coordiates of point P_k is (x_k, y_k). You are about to count the number of pairs of congruent triangles, whose vertices are 6 distinct points among the given ones.

Formally, you should count the number of tuples of indices $(i_1, i_2, i_3, j_1, j_2, j_3)$ satisfying all the below conditions:

- $1 \leq i_1, i_2, i_3, j_1, j_2, j_3 \leq n$
- $i_1 < i_2 < i_3$
- 6 indices $i_1, i_2, i_3, j_1, j_2, j_3$ are pairwise distinct.
- Triangle $P_{i_1}P_{i_2}P_{i_3}$ is non-degenerate (in other words, it has positive area).
- $\triangle P_{i_1}P_{i_2}P_{i_3} \cong \triangle P_{j_1}P_{j_2}P_{j_3}$

Input

The first line contains a single integer n $(6 \leq n \leq 100)$ — denoting the number of given points.

Among the last n lines, the k-th one contains two integers x_k and y_k $(0 \leq |x_k|, |y_k| \leq 10^9)$ denoting the coordinates of point P_k.

It is guaranteed that all given points are pairwise distinct.

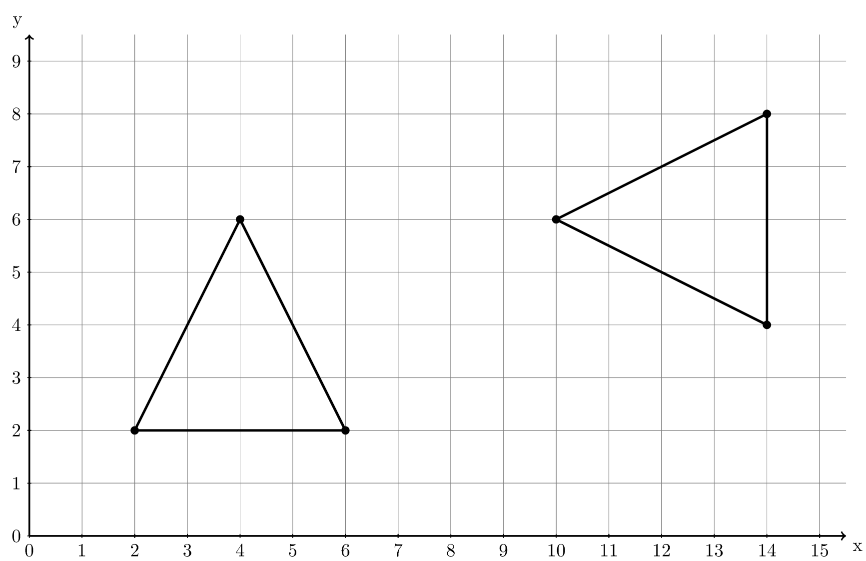
Output

Print a single integer — the number of tuples satisfying all the above conditions.

Explanation of the sample

The below figure demonstrates the above sample. The 4 valid tuples are:

- $(1, 2, 3, 4, 5, 6)$
- $(1, 2, 3, 4, 6, 5)$
- $(4, 5, 6, 1, 2, 3)$
- $(4, 5, 6, 1, 3, 2)$



Sample Input 1

```
6
2 2
4 6
6 2
14 8
10 6
14 4
```

Sample Output 1

```
4
```