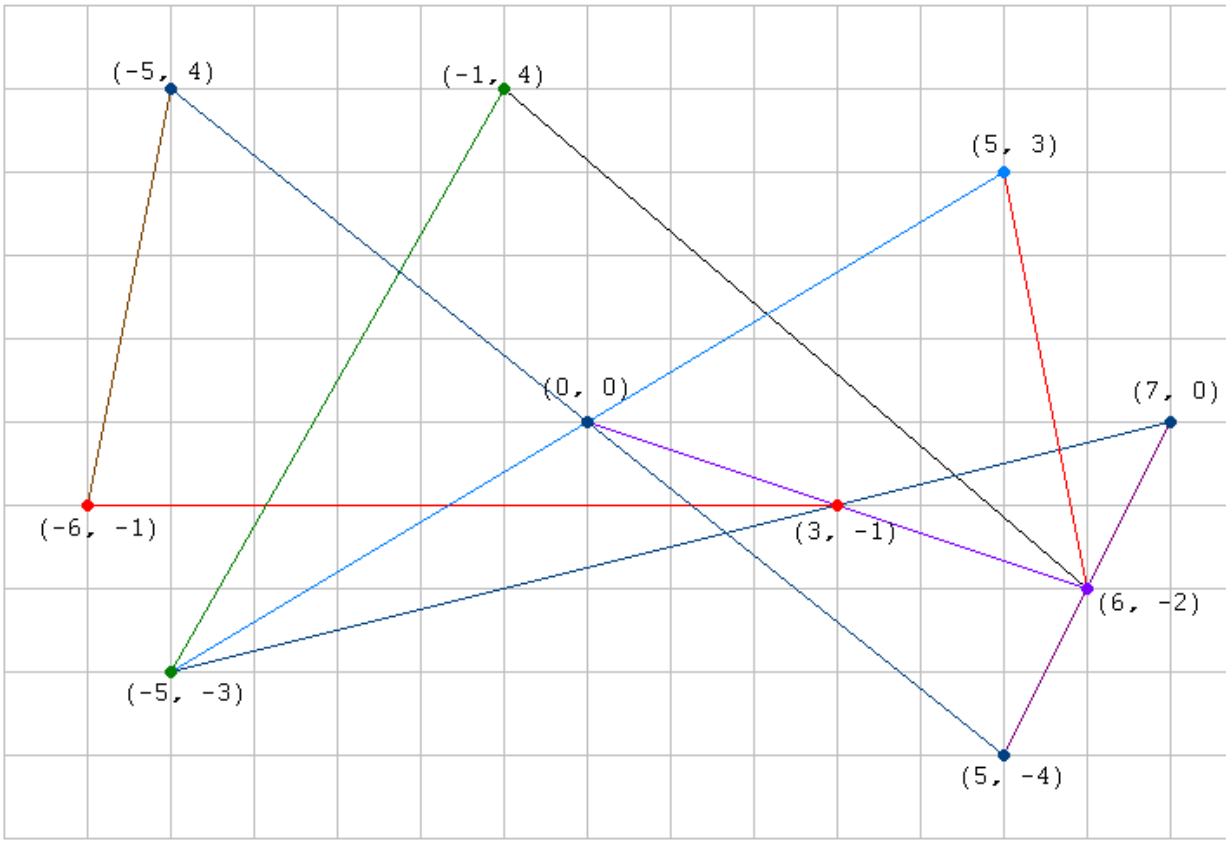
How many triangles are there in the following figure?



... ding! Time's up. The answer is 29.

Given at most 10 line segments, you are to **write a program** that counts the number of triangles bounded by them. Note that three colinear points do **not** make a triangle.

Input

Input consists of several test cases. Each case begins with a line containing an integer N ($3 \leq N \leq 10$). The following N lines each gives four integers, x_1, y_1, x_2 and y_2, meaning that you draw a straight line segment from (x_1, y_1) to (x_2, y_2). All the coordinates given have their absolute values no greater than 100.

Input is terminated by EOF.

Output

For each case, output the number of triangles bounded by the N lines.

Sample Input

```
10
-5 4 5 -4
-5 4 -6 -1
-5 -3 -1 4
-5 -3 5 3
-5 -3 7 0
-1 4 6 -2
0 0 6 -2
6 -2 5 3
7 0 5 -4
-6 -1 3 -1
```

Sample Output

```
29
```