"How am I ever going to solve this problem?" said the pilot.

Indeed, the pilot was not facing an easy task. She had to drop packages at specific points scattered in a dangerous area. Furthermore, the pilot could only fly over the area once in a straight line, and she had to fly over as many points as possible. All points were given by means of integer coordinates in a two-dimensional space. The pilot wanted to know the largest number of points from the given set that all lie on one line. Can you write a program that calculates this number?

Your program has to be efficient!

Input

The input begins with a single positive integer on a line by itself indicating the number of the cases following, each of them as described below. This line is followed by a blank line, and there is also a blank line between two consecutive inputs.

The input consists of N pairs of integers, where $1 < N < 700$. Each pair of integers is separated by one blank and ended by a new-line character. The list of pairs is ended with an end-of-file character. No pair will occur twice.

Output

For each test case, the output must follow the description below. The outputs of two consecutive cases will be separated by a blank line.

The output consists of one integer representing the largest number of points that all lie on one line.

Sample Input

```
1


1 1
2 2
3 3
9 10
10 11
```

Sample Output

```
3
```