**Plotting Points**

Marcus is using the linear regression feature on his calculator and notices that not a lot of points are on the line. He thinks it would be interesting to make a function that creates a line that goes through the greatest number of points. Do you think you can help him out?

**Input:** The first line of input contains **T**, the number of test cases. Each test case will consist of **P**, the number of points, and the next **P** lines each contain two integers, the **X** and **Y** coordinate of that point.

**Output:** For each test case you will first output “CASE #(case number): “ followed by the maximum number of points you can have on a given line.

**Example Input:**

2

3

1 1

2 2

3 3

6

1 1

3 2

5 3

4 1

2 3

1 4

**Example Output:**

CASE #1: 3

CASE #2: 4

Chart, scatter chart

Description automatically generated**Explanation:** For the first test case, the answer would look as such:

As you can see, the three points are diagonal from each other, which makes finding the line simple.

Chart, scatter chart

Description automatically generatedIn the second test case, the answer would look like:

The maximum number of points would be 4, and this is what it would look like.