

## 1292 – Laser Shot

You have a powerful laser gun and obstacles can be destroyed with the gun, and the laser never stops. Yes, it means that it destroys obstacles and keeps going. No obstacles can stop this.

Now you have exactly one laser shot left and you want to destroy maximum number of obstacles. The obstacles are scattered, and for this problem assume that the obstacles are placed in 2D Cartesian coordinates. You can move to any point as you want (not necessarily in integer coordinates), and you can make exactly one shot. Your target is to find the maximum number of obstacles you can destroy in this shot.

### Input

Input starts with an integer **T** ( $\leq 30$ ), denoting the number of test cases.

Each case starts with a line containing an integer **n** ( $1 \leq n \leq 700$ ) denoting the number of points. Each of the next **n** lines contains two integers **x y** ( $-10000 \leq x, y \leq 10000$ ) denoting the coordinate of an obstacle. You can assume that the coordinates of all the obstacles are distinct.

### Output

For each case, print the case number and maximum number of obstacles you can destroy in one laser shot.

Sample Input	Output for Sample Input
2 5 1 1 2 2 2 9 3 10 10 17 3 5 6 6 7 2 8	Case 1: 3 Case 2: 2