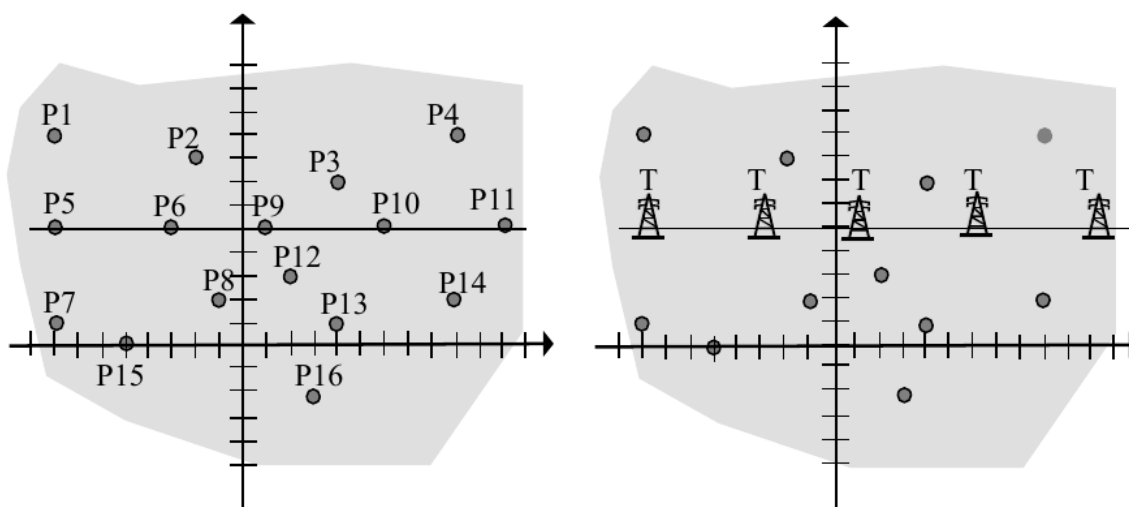


2877 Electric Reconfiguration

The electric company is reconfiguring the electric distribution system in the farm. The engineer in charge is evaluating the feasibility to develop the project. The idea is to determine the maximum number of electrification posts lined up in that zone to replace them by high voltage towers, the cost of the project depends exclusively of that number. He was hired to build a program to determine it. The program input will be composed by the number n ($5 \leq n \leq 100$) of electrification posts, and their configuration in a coordinated system.

The output is the maximum number of electrification posts lined up.



Input

The input contains several data sets. Each dataset is composed with the value n , followed of n pairs of integers representing the configuration of electrification posts.

A case with $n = 0$ will mark the end of file.

Output

The output gives the integers representing the maximum number of electrification posts lined up for each test case, one in each line.

Sample Input

```

16
-8 9
-2 8
4 7
9 9
-8 5
-3 5
-8 1
-1 2
  
```

```
1 5
6 5
11 5
2 3
4 1
9 2
-5 0
3 -2
0
```

Sample Output

```
5
```