# 点的凸包

## Description

Convex Hull of a set of points, in 2D plane, is a convex polygon with m inimum area such that each point lies either on the boundary of polygo n or inside it. Now given a set of points the task is to find the convex h ull of points.

## Input

The first line of input contains an integer T denoting the no of test case s. Then T test cases follow. Each test case contains an integer N deno ting the no of points. Then in the next line are N*2 space separated val ues denoting the points ie x and y.Constraints:1<=T<=100,1<=N<=10 0,1<=x,y<=1000

## Output

For each test case in a new line print the points x and y of the convex hull separated by a space in sorted order (increasing by x) where ever y pair is separated from the other by a ','. If no convex hull is possible print -1.

## Sample Input 1

```
2
3
1 2 3 1 5 6
3
1 2 4 4 5 1
```

## Sample Output 1

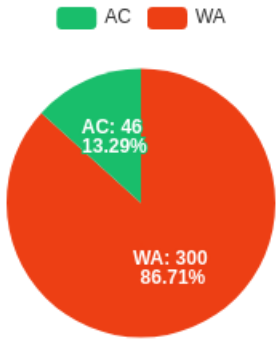
```
1 2, 3 1, 5 6
1 2, 4 4, 5 1
```

Problems
Announcements
Submissions
Rankings
View Contest

Information

| | |
|---|---|
| ID | 2 |
| Time Limit | 1000MS |
| Memory Limit | 256MB |
| Created By | root |
| Level | Low |
| Tags | Show |

Statistic Details




Language: C++ Theme: Solarized Light

```
1
```

Submit