# Points on a Rectangle

You are given $q$ queries where each query consists of a set of $n$ points on a two-dimensional plane (i.e., $(x, y)$). For each set of points, print `YES` on a new line if all the points fall on the edges (i.e., sides and/or corners) of a non-degenerate rectangle which is axis parallel; otherwise, print `NO` instead.

**Input Format**

The first line contains a single positive integer, $q$, denoting the number of queries. The subsequent lines describe each query in the following format:

1. The first line contains a single positive integer, $n$, denoting the number of points in the query.
2. Each line $i$ of the $n$ subsequent lines contains two space-separated integers describing the respective values of $x_i$ and $y_i$ for the point at coordinate $(x_i, y_i)$.

**Constraints**

- $1 \leq q \leq 10$
- $1 \leq n \leq 10$
- $-10^4 \leq x, y \leq 10^4$

**Output Format**

For each query, print `YES` on a new line if all $n$ points lie on the edges of some non-degenerate rectangle; otherwise, print `NO` instead.

**Sample Input**

```
2
3
0 0
0 1
1 0
4
0 0
0 2
2 0
1 1
```

**Sample Output**

```
YES
NO
```

**Explanation**

We perform the following $q = 2$ queries:

1. In the first query, all points lie on the edges of a non-degenerate rectangle with corners at $(0, 0)$, $(0, 1)$, $(1, 0)$, and $(1, 1)$. Thus, we print `YES` on a new line.
2. In the second query, points $(0, 0)$, $(0, 2)$, and $(2, 0)$ *could* all lie along the edge of some non-degenerate rectangle, but point $(1, 1)$ would have to fall *inside* that rectangle. Thus, we print `NO` on a new line.