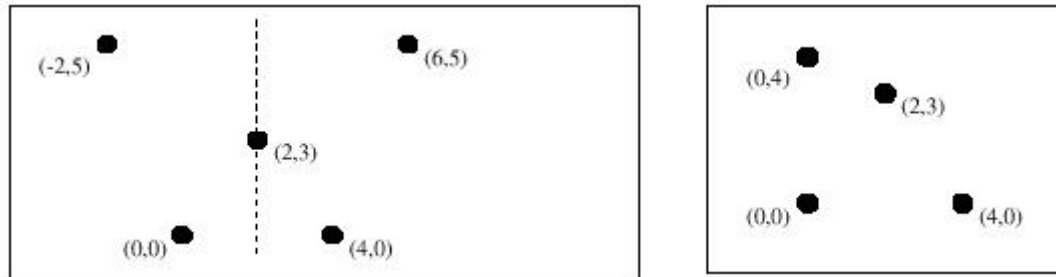


## 3226 Symmetry

The figure shown on the left is *left-right symmetric* as it is possible to fold the sheet of paper along a *vertical line*, drawn as a dashed line, and to cut the figure into two identical halves. The figure on the right is not left-right symmetric as it is impossible to find such a vertical line.



Write a program that determines whether a figure, drawn with dots, is left-right symmetric or not. The dots are all distinct.

### Input

The input consists of  $T$  test cases. The number of test cases  $T$  is given in the first line of the input file. The first line of each test case contains an integer  $N$ , where  $N$  ( $1 \leq N \leq 1,000$ ) is the number of dots in a figure. Each of the following  $N$  lines contains the  $x$ -coordinate and  $y$ -coordinate of a dot. Both  $x$ -coordinates and  $y$ -coordinates are integers between  $-10,000$  and  $10,000$ , both inclusive.

### Output

Print exactly one line for each test case. The line should contain 'YES' if the figure is left-right symmetric, and 'NO', otherwise.

### Sample Input

```

3
5
-2 5
0 0
6 5
4 0
2 3
4
2 3
0 4
4 0
0 0
4
5 14
6 10
5 10
6 14
  
```

**Sample Output**

YES  
NO  
YES