

Given the vertices of two triangles, check whether both of them have any common interior point. No points on the edges or vertices are considered interior to a triangle.

Input

Input starts with an integer t ($t \leq 50$) denoting the number of test cases to follow. Each test case contains 12 integers which are the vertices of the triangles as (x, y) pair. First three pairs are for one triangle and rest of them are for the other one. None of the triangles will be invalid. There is a blank line before each test case.

Output

For each input, print one line of output. Each line will contain 'yes' if there are common interior points between the two triangles, 'no' otherwise. See the sample output for exact formatting.

Sample Input

```
2

0 0 2 0 0 2
1 1 3 3 2 3

0 0 2 0 0 2
3 0 5 0 4 2
```

Sample Output

```
pair 1: no
pair 2: no
```