

Intersecting Circles

Given two circles with centers at (x_1, y_1) and (x_2, y_2) and having radius r_1 and r_2 respectively, find if they intersect or not. Two circles are considered to be intersecting if they have a common area. Even if two circles touch at a point then they are considered to be intersecting.

Input

First line contains an integer T . Then follow T lines each line containing integers $x_1, y_1, x_2, y_2, r_1, r_2$ in that order.

Output

Print "YES" (without quotes) if they intersect and "NO" if they don't intersect.

Constraints

$T \leq 10,000$

All other integers will have an absolute value $\leq 1000,000,000$

Example

Input:

```
3
0 0 2 2 1 1
0 0 2 2 3 3
0 0 1000000000 0 600000000 400000000
```

Output:

```
NO
YES
YES
```