11334   Antenna in the Cinoc Mountains

Cinoc is a mountain region that offers a spectacular natural environment. The area is sometimes called the last wilderness area, but in reality the Cinoc Mountains area is a cultural landscape. The mountains of Cinoc are also an important recreational area for people from around the world and have a particular characteristic: all of them have conic form (a right cone with circular base) and are placed on a completely flat land.

In order to attend any possible emergency, the administration of the Cinoc National Park requires to install two towers of communication, to connect two distant places in the park. The connection between the towers is only possible if there is a *line of sight* between the two towers, that is to say, the highest point of one tower can be seen from the highest point of the other tower. Also, to avoid interferences, the distance from any point in the line of sight to any point on the territory must be greater than zero.

Your task is to write a program that, given a map of the park and the description of the two towers, decides if the connection is possible or not.

Input

The input consists of several test cases. For each test case: the first line contains an integer number k, $0 \le k \le 50$, and is followed by $k+2$ lines. In each case the number k is the number of mountains in Cinoc Mountains region. Each of the next k lines contains four positive, integer numbers xm, ym, hm and rm, $0 \le xm, ym, hm, rm \le 10000$, describing a conic mountain ((xm, ym, hm) denotes the coordinates of the top of the mountain and rm denotes the radius of the base). The last two lines contain the information associated with the towers: three numbers per line: xt, yt and ht, $0 \le xt, yt, ht \le 10000$, ($(xt, yt, ht)$ denotes the location of the tower's top). The last case is followed by a single line containing '-1'.

Output

For each test case, if there exists a valid line of sight between the corresponding top points of the towers, the following line must be printed:

`Yes`

In other case, the following line must be printed:

`No`

The answers for the different cases must preserve the order of the input.

Sample Input

```
2
10 10 2 5
10 2 2 2
10 2 3
2 2 2
1
10 2 2 2
5 2 1
```

```
15 2 1
-1
```

Sample Output

```
Yes
No
```