Interesting Intersections

Filename: SEGMENT

The Problem:

Given a circle and a line segment, determine whether the line segment intersects the circle.

The Input:

There will be several data sets. Each data set will consist of exactly two lines of input. The first line will contain three real numbers x, y, and r, where the point (x, y) is the center of the circle and r is its radius (r will be positive). The second line will contain four real numbers x_1, y_1, x_2, and y_2, where (x_1, y_1) and (x_2, y_2) are the endpoints of the line segment. (x_1, y_1) and (x_2, y_2) will not be the same point.

The Output:

For each data set, print one of the following messages, whichever is appropriate:

```
The line segment intersects the circle.
The line segment does not intersect the circle.
```

Sample Input:

```
0.0 0.0 1.0
10.0 10.0 20.0 20.0
5.0 0.0 4.0
0.0 10.0 10.0 -10.0
```

Sample Output:

```
The line segment does not intersect the circle.
The line segment intersects the circle.
```