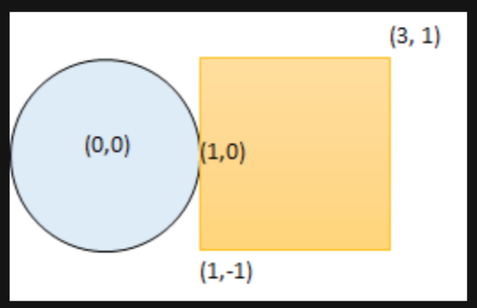
1401. Circle and Rectangle Overlapping

Description

You are given a circle represented as `(radius, xCenter, yCenter)` and an axis-aligned rectangle represented as `(x1, y1, x2, y2)`, where `(x1, y1)` are the coordinates of the bottom-left corner, and `(x2, y2)` are the coordinates of the top-right corner of the rectangle.

Return `true` *if the circle and rectangle are overlapped otherwise return* `false`. In other words, check if there is **any** point `(x_i, y_i)` that belongs to the circle and the rectangle at the same time.

Example 1:

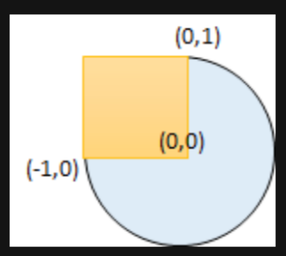



```
Input: radius = 1, xCenter = 0, yCenter = 0, x1 = 1, y1 = -1, x2 = 3, y2 = 1
Output: true
Explanation: Circle and rectangle share the point (1,0).
```

Example 2:

```
Input: radius = 1, xCenter = 1, yCenter = 1, x1 = 1, y1 = -3, x2 = 2, y2 = -1
Output: false
```

Example 3:




```
Input: radius = 1, xCenter = 0, yCenter = 0, x1 = -1, y1 = 0, x2 = 0, y2 = 1
Output: true
```

Constraints:

- `1 <= radius <= 2000`
- `-10^4 <= xCenter, yCenter <= 10^4`
- `-10^4 <= x1 < x2 <= 10^4`
- `-10^4 <= y1 < y2 <= 10^4`