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Supermoon Viewing

Recently, the moon has passed closer to the Earth than it has in decades[1]. Hazel, set on seizing the opportunity, stayed up all night to watch the moon through her circular window. Unfortunately, the moon and Hazel's window did not perfectly align, and Hazel could only see part of the moon. Can you figure out how much of the moon she saw?

Input
Each test case begins with three integers $\mathbf{X}_w$, $\mathbf{Y}_w$, $\mathbf{R}_w$ ($1 \leq \mathbf{X}_w, \mathbf{Y}_w, \mathbf{R}_w \leq 1000$), representing a circle centered at ($\mathbf{X}_w$, $\mathbf{Y}_w$) with radius $\mathbf{R}_w$, the part of the sky that she could see through her window.
The next line contains three integers $\mathbf{X}_M$, $\mathbf{Y}_M$, $\mathbf{R}_M$ ($1 \leq \mathbf{X}_w, \mathbf{Y}_w, \mathbf{R}_w \leq 1000$), the position of the moon in the sky.

Output
For each test case, output the area of the moon that was visible, rounded to two decimal places.

Sample Input 1:
```
1 1 2
1 1 1
```

Sample Output 1:
```
3.14
```

Sample Input 2:
```
1 2 1
1 1 1
```

Sample Output 2:
```
1.23
```