

Problem 2481: Minimum Cuts to Divide a Circle

Problem Information

Difficulty: Easy

Acceptance Rate: 55.73%

Paid Only: No

Tags: Math, Geometry

Problem Description

A **valid cut** in a circle can be:

- * A cut that is represented by a straight line that touches two points on the edge of the circle and passes through its center, or
- * A cut that is represented by a straight line that touches one point on the edge of the circle and its center.

Some valid and invalid cuts are shown in the figures below.



Given the integer `n`, return _the**minimum** number of cuts needed to divide a circle into `n` equal slices.

Example 1:



Input: n = 4 **Output:** 2 **Explanation:** The above figure shows how cutting the circle twice through the middle divides it into 4 equal slices.

Example 2:



Input: n = 3 **Output:** 3 **Explanation:** At least 3 cuts are needed to divide the circle into 3 equal slices. It can be shown that less than 3 cuts cannot result in 3 slices of equal size

and shape. Also note that the first cut will not divide the circle into distinct parts.

****Constraints:****

* `1 <= n <= 100`

Code Snippets

C++:

```
class Solution {  
public:  
    int numberOfCuts(int n) {  
  
    }  
};
```

Java:

```
class Solution {  
public int numberOfCuts(int n) {  
  
}  
}
```

Python3:

```
class Solution:  
    def numberOfCuts(self, n: int) -> int:
```