Problem 2485: Find the Pivot Integer

Problem Information

Difficulty: Easy
Acceptance Rate: 83.89%
Paid Only: No
Tags: Math, Prefix Sum

Problem Description

Given a positive integer `n`, find the **pivot integer** `x` such that:

* The sum of all elements between `1` and `x` inclusively equals the sum of all elements between `x` and `n` inclusively.

Return _the pivot integer_ `x`. If no such integer exists, return `-1`. It is guaranteed that there will be at most one pivot index for the given input.

Example 1:

Input: n = 8 **Output:** 6 **Explanation:** 6 is the pivot integer since: 1 + 2 + 3 + 4 + 5 + 6 = 6 + 7 + 8 = 21.

Example 2:

Input: n = 1 **Output:** 1 **Explanation:** 1 is the pivot integer since: 1 = 1.

Example 3:

Input: n = 4 **Output:** -1 **Explanation:** It can be proved that no such integer exist.

Constraints:

* `1 <= n <= 1000`

Code Snippets

C++:

```
class Solution {
public:
int pivotInteger(int n) {

}
};
```

Java:

```
class Solution {
public int pivotInteger(int n) {

}
}
```

Python3:

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