

Problem 342: Power of Four

Problem Information

Difficulty: Easy

Acceptance Rate: 51.38%

Paid Only: No

Tags: Math, Bit Manipulation, Recursion

Problem Description

Given an integer `n`, return `true` if it is a power of four. Otherwise, return `false`.

An integer `n` is a power of four, if there exists an integer `x` such that $n == 4^x$.

Example 1:

Input: n = 16 **Output:** true

Example 2:

Input: n = 5 **Output:** false

Example 3:

Input: n = 1 **Output:** true

Constraints:

$-2^{31} \leq n \leq 2^{31} - 1$

Follow up: Could you solve it without loops/recursion?

Code Snippets

C++:

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

Java:

```
class Solution {  
public boolean isPowerOfFour(int n) {  
  
}  
}
```

Python3:

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