

# Problem 1780: Check if Number is a Sum of Powers of Three

## Problem Information

Difficulty: **Medium**

Acceptance Rate: 79.34%

Paid Only: No

Tags: Math

## Problem Description

Given an integer `n`, return `true` if it is possible to represent `n` as the sum of distinct powers of three. Otherwise, return `false`.

An integer `y` is a power of three if there exists an integer `x` such that  $y == 3^x$ .

**Example 1:**

**Input:** `n = 12` **Output:** `true` **Explanation:** `12 = 3^1 + 3^2`

**Example 2:**

**Input:** `n = 91` **Output:** `true` **Explanation:** `91 = 3^0 + 3^2 + 3^4`

**Example 3:**

**Input:** `n = 21` **Output:** `false`

**Constraints:**

`1 <= n <= 10^7`

## Code Snippets

**C++:**

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

**Java:**

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

**Python3:**

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