

## 326 Power of Three

2018年4月9日 14:04

### Question:

Given an integer, write a function to determine if it is a power of three.

### Follow up:

Could you do it without using any loop / recursion?

来自 <<https://leetcode.com/problems/power-of-three/description/>>

给出一个整数，写一个函数来确定这个数是不是3的一个幂。

### 后续挑战:

你能不使用循环或者递归完成本题吗？

### Solution for Python3:

```
1  class Solution1:
2      def isPowerOfThree(self, n):
3          """
4              :type n: int
5              :rtype: bool
6          """
7          if n > 1:
8              while n % 3 == 0:
9                  n //= 3
10             return n == 1
11
12  class Solution2:
13      def isPowerOfThree(self, n):
14          """
15              :type n: int
16              :rtype: bool
17          """
18          import sys
19          import math
20          return n > 0 and math.pow(3,33) % n == 0
```

### Solution for C++:

```
1  class Solution1 {
2  public:
3      bool isPowerOfThree(int n) {
4          if (n > 1) {
5              while (n % 3 == 0) {
6                  n /= 3;
7              }
8          }
9          return n==1;
10     }
11 };
12
13 class Solution2 {
14 public:
15     bool isPowerOfThree(int n) {
16         return n > 0 && (int(pow(3,19)) % n) == 0;
17     }
18 };
```