

## Day-31 of the 101 days coding challenge

### Problem:

Given an integer  $n$ , return *true if it is a power of two. Otherwise, return false*.

An integer  $n$  is a power of two, if there exists an integer  $x$  such that  $n == 2^x$ .

#### Example 1:

**Input:**  $n = 1$

**Output:** true

**Explanation:**  $2^0 = 1$

#### Example 2:

**Input:**  $n = 16$

**Output:** true

**Explanation:**  $2^4 = 16$

#### Example 3:

**Input:**  $n = 3$

**Output:** false

#### Constraints:

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

### Code:

```
bool isPowerOfTwo(int n) {  
  
    int result = 1;  
    for(int i = 0; i<=30; i++){  
        if(result == n){  
            return true;  
        }  
        if(result<INT_MAX/2) // value should not be greater  
            result = result * 2;  
    }  
    return false;  
}
```