Problem Description: Carol Prime Number Check

Objective: Write a function `isCarolPrime(n)` that takes a positive integer `n` and returns `True` if `n` is a Carol prime number, and `False` otherwise.

> **Definition:**
> A Carol prime is a prime number that is of the form $2^m - 1)^2 - 2$ where m is a positive integer. Not all numbers of this form are prime, but those that are, are called Carol primes.
>
> For example, for $m = 2$, the Carol number is $(2^2 - 1)^2 - 2 = 3^2 - 2 = 7$, which is a prime number.

Parameters:

- `n (int)`: A positive integer which needs to be checked if it is a Carol prime number.

Returns:

- `bool`: `True` if `n` is a Carol prime number, `False` otherwise.

Examples:

1. **Example 1:**
   - **Input:** `n = 7`
   - **Output:** `True`
   - **Explanation:** For m=2m = 2m=2, the Carol number is (22−1)2−2=7(2^2 - 1)^2 - 2 = 7(22−1)2−2=7, which is a prime number.
2. **Example 2:**
   - **Input:** `n = 47`
   - **Output:** `True`
   - **Explanation:** For m=3m = 3m=3, the Carol number is (23−1)2−2=47(2^3 - 1)^2 - 2 = 47(23−1)2−2=47, which is a prime number.
3. **Example 3:**
   - **Input:** `n = 15`
   - **Output:** `False`
   - **Explanation:** 15 is not of the form (2m−1)2−2(2^m - 1)^2 - 2(2m−1)2−2 where mmm is a positive integer, nor is it prime.
4. **Example 4:**
   - **Input:** `n = 23`
   - **Output:** `False`

    - **Explanation:** 23 is a prime number but not a Carol number.

Explanation of Sample Input and Output:

- For the input `n = 7`, the function returns `True` because 7 is a Carol prime number for m=2m = 2m=2.
- For the input `n = 47`, the function returns `True` because 47 is a Carol prime number for m=3m = 3m=3.
- For the input `n = 15`, the function returns `False` because 15 is neither a prime number nor of the form (2m−1)2−2(2^m - 1)^2 - 2(2m−1)2−2.
- For the input `n = 23`, the function returns `False` because although 23 is a prime number, it is not a Carol number.

Hints:

- A number of the form (2m−1)2−2(2^m - 1)^2 - 2(2m−1)2−2 can be calculated for various values of mmm and checked for primality.
- Check if the given number matches any Carol numbers up to a reasonable value of mmm and if it is prime.