397. Integer Replacement

Given a positive integer n, you can apply one of the following operations:

1. If n is even, replace n with n / 2.
2. If n is odd, replace n with either n + 1 or n - 1.

Return the minimum number of operations needed for n to become 1.

Example 1:

- **Input:** n = 8
- **Output:** 3
- **Explanation:** 8 -> 4 -> 2 -> 1

Example 2:

- **Input:** n = 7
- **Output:** 4
- **Explanation:**
  - 7 -> 8 -> 4 -> 2 -> 1
  - or 7 -> 6 -> 3 -> 2 -> 1

Example 3:

- **Input:** n = 4
- **Output:** 2

Constraints:

- $1 <= n <= 2^{31} - 1$