

1404. Number of Steps to Reduce a Number in Binary Representation to One

Solved ●

Medium  Topics  Companies  Hint

Given the binary representation of an integer as a string `s`, return *the number of steps to reduce it to 1* under the following rules:

- If the current number is even, you have to divide it by 2.
- If the current number is odd, you have to add 1 to it.

It is guaranteed that you can always reach one for all test cases.

Example 1:

Input: `s = "1101"`**Output:** 6**Explanation:** "1101" corresponds to number 13 in their decimal representation.

Step 1) 13 is odd, add 1 and obtain 14.

Step 2) 14 is even, divide by 2 and obtain 7.

Step 3) 7 is odd, add 1 and obtain 8.

Step 4) 8 is even, divide by 2 and obtain 4.

Step 5) 4 is even, divide by 2 and obtain 2.

Step 6) 2 is even, divide by 2 and obtain 1.

Example 2:

Input: `s = "10"`**Output:** 1**Explanation:** "10" corresponds to number 2 in their decimal representation.

Step 1) 2 is even, divide by 2 and obtain 1.

Example 3:

Input: `s = "1"`**Output:** 0

Constraints:

- `1 <= s.length <= 500`
- `s` consists of characters '0' or '1'
- `s[0] == '1'`

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Yes No

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Hint 1



Hint 2



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