481. Magical String

A magical string s consists of only '1' and '2' and obeys the following rules:

- The string s is magical because concatenating the number of contiguous occurrences of characters '1' and '2' generates the string s itself.

The first few elements of s is s = "1221121221221121122……". If we group the consecutive 1's and 2's in s, it will be "1 22 11 2 1 22 1 22 11 2 11 22 ....." and the occurrences of 1's or 2's in each group are "1 2 2 1 1 2 1 2 2 1 2 2 .....". You can see that the occurrence sequence is s itself.

Given an integer n, return the number of 1's in the first n number in the magical string s.

Example 1:

- **Input:** n = 6
- **Output:** 3
- **Explanation:** The first 6 elements of magical string s is "122112" and it contains three 1's, so return 3.

Example 2:

- **Input:** n = 1
- **Output:** 1

Constraints:

- $1 <= n <= 10^5$