481. Magical String

Description

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 = "122112122112112122112....."`. 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`