

1611. Minimum One Bit Operations to Make Integers Zero

Description

Given an integer n , you must transform it into 0 using the following operations any number of times:

- Change the rightmost (0^{th}) bit in the binary representation of n .
- Change the i^{th} bit in the binary representation of n if the $(i-1)^{\text{th}}$ bit is set to 1 and the $(i-2)^{\text{th}}$ through 0^{th} bits are set to 0 .

Return *the minimum number of operations to transform n into 0* .

Example 1:

Input: $n = 3$

Output: 2

Explanation: The binary representation of 3 is "11".

"11" \rightarrow "01" with the 2nd operation since the 0th bit is 1.

"01" \rightarrow "00" with the 1st operation.

Example 2:

Input: $n = 6$

Output: 4

Explanation: The binary representation of 6 is "110".

"110" \rightarrow "010" with the 2nd operation since the 1st bit is 1 and 0th through 0th bits are 0.

"010" \rightarrow "011" with the 1st operation.

"011" \rightarrow "001" with the 2nd operation since the 0th bit is 1.

"001" \rightarrow "000" with the 1st operation.

Constraints:

- $0 \leq n \leq 10^9$

