Number of Ones

Given a sorted bit array (values of 0, and 1) determine the number of 1’s in the array.  
  
Input: Array of elements with values belong to the set S : { 0, 1 }  
Output: Integer

# Example

Input: [0, 0, 0, 1, 1, 1] => Output: 3

Input: [0, 0, 0, 0] => Output: 0

# Constraints

Time Complexity: O(logN)  
Auxiliary Space Complexity: O(1)  
  
A linear search is not acceptable for runtime.

# Solution

1. Perform a binary search to determine the index of the first 1.
2. Return the difference between the length of the input array and the index of the first 1.

# Notes

N/A

# Resources

https://en.wikipedia.org/wiki/Binary\_search\_algorithm