CHALLENGE 1C

Glass Tree

Problem Description

The glass tree is composed up of tiles that form a tree. Some tiles are ***safe*** **(1)** and made of tempered glass, while others are made of weaker regular glass and will ***break*** **(0)**.

Your goal is to calculate the number of completely safe paths from the starting platform (the root of the tree) to the finish line (the leaf nodes). A path is considered safe if every tile along the way is a safe tile (1).
The first element is the root tile.
For a tile at index i:

- Its left child is at index 2 * i + 1.
- Its right child is at index 2 * i + 2.

If a path encounters a dangerous tile (0), that path is invalid and cannot be used.

Input Specification:

You are given the root of the glass tree as an array, where each element is either 1 (safe tempered glass) or 0 (dangerous regular glass).

Output Specification:

Return a single integer, representing the number of safe paths from the root to any leaf node.

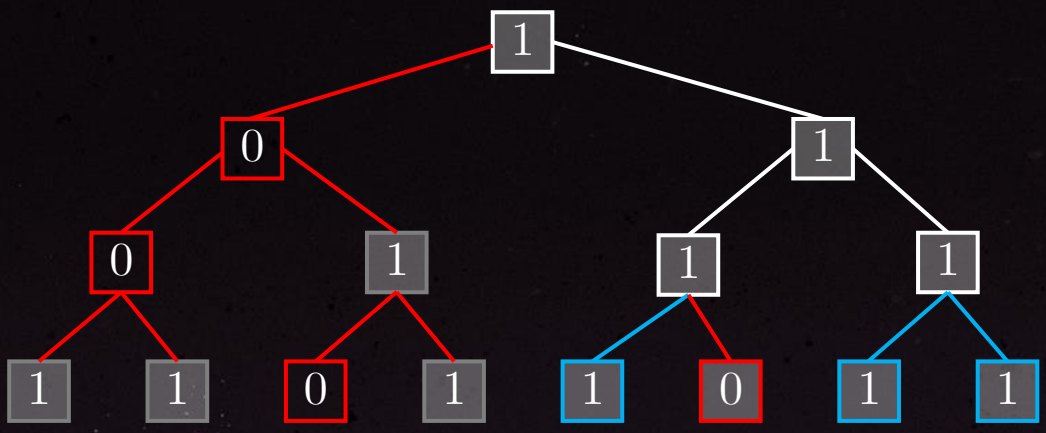
Sample Input

Sample Output

101011111011011	3

Explanation

If we break the string up into each level, we get
1 01 0111 11011011

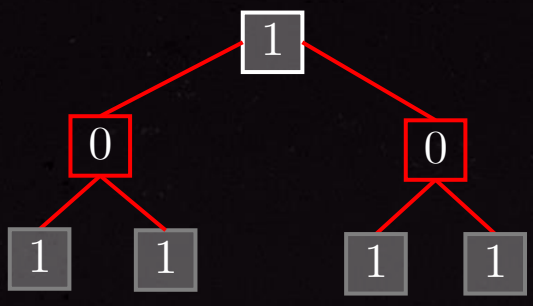


There are **3** possible paths to take.

1001111	0

Explanation

If we break the string up into each level, we get
1 00 1111



There are **0** possible paths to take.