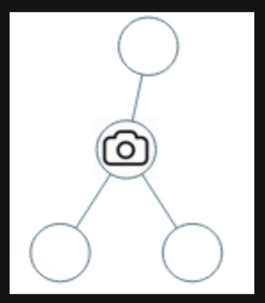
968. Binary Tree Cameras

Description

You are given the `root` of a binary tree. We install cameras on the tree nodes where each camera at a node can monitor its parent, itself, and its immediate children.

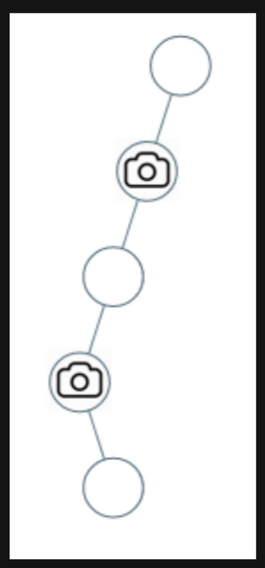
Return *the minimum number of cameras needed to monitor all nodes of the tree*.

Example 1:



```
Input: root = [0,0,null,0,0]
Output: 1
Explanation: One camera is enough to monitor all nodes if placed as shown.
```

Example 2:



```
Input: root = [0,0,null,0,null,0,null,null,0]
Output: 2
Explanation: At least two cameras are needed to monitor all nodes of the tree. The above image shows one of the valid configurations of camera placement.
```

Constraints:

- The number of nodes in the tree is in the range `[1, 1000]`.
- `Node.val == 0`