class Solution {

public:

int countNodes(TreeNode\* root) {

int res = 0;

int lh = 0, rh = 0;

while(root){

if(!lh){

for(TreeNode \* p = root->left; p; p = p->left)

++lh;

}

if(!rh){

for(TreeNode \* p = root->right; p; p = p->left)

++rh;

}

if(lh == rh){

res += 1<<lh;

root = root->right;

--lh;

rh = 0;

}else{

res += 1<<rh;

root = root->left;

--lh;

rh = 0;

}

}

return res;

}

};