

# 662. Maximum Width of Binary Tree

## Description

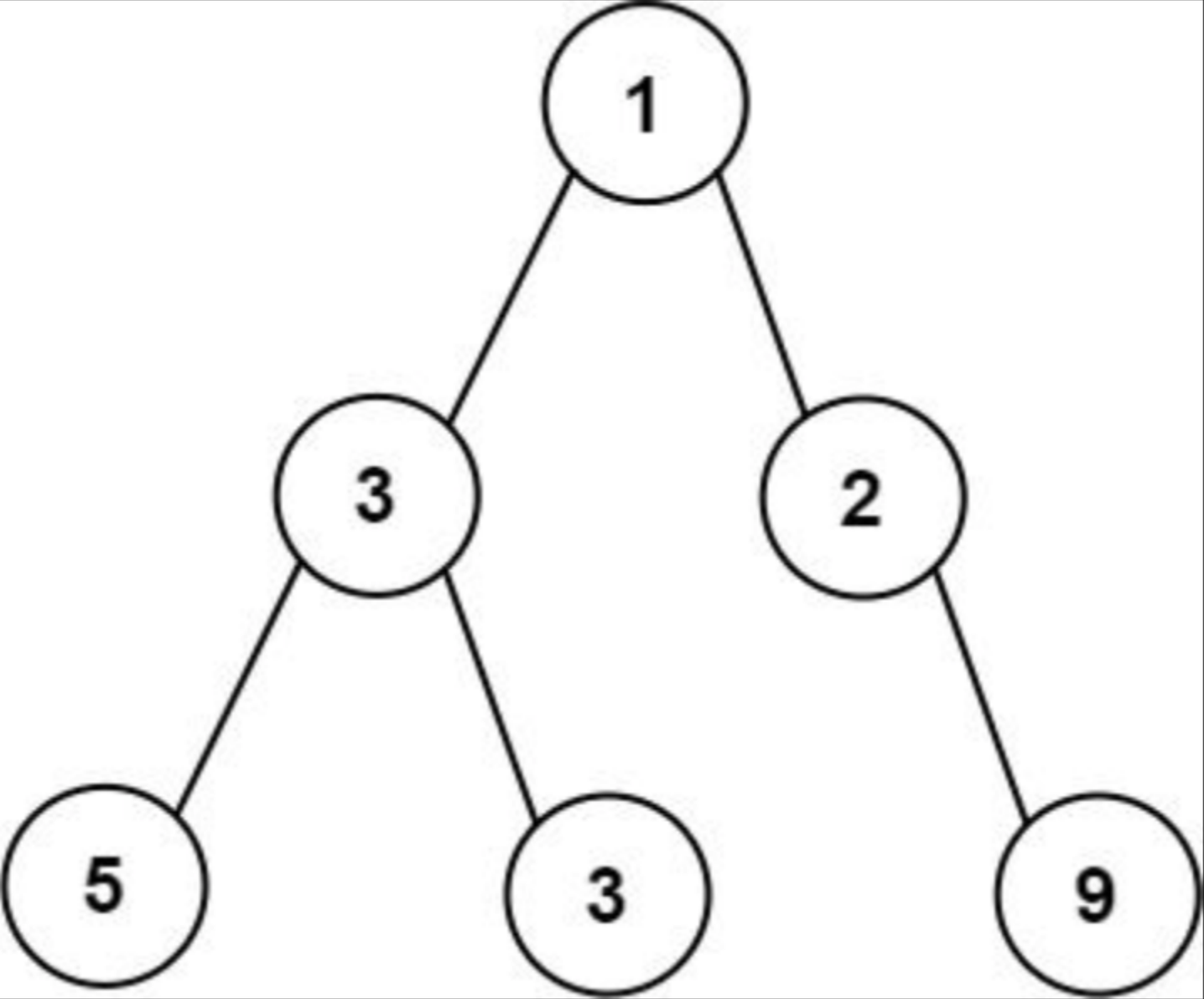
Given the `root` of a binary tree, return *the maximum width of the given tree*.

The **maximum width** of a tree is the maximum **width** among all levels.

The **width** of one level is defined as the length between the end-nodes (the leftmost and rightmost non-null nodes), where the null nodes between the end-nodes that would be present in a complete binary tree extending down to that level are also counted into the length calculation.

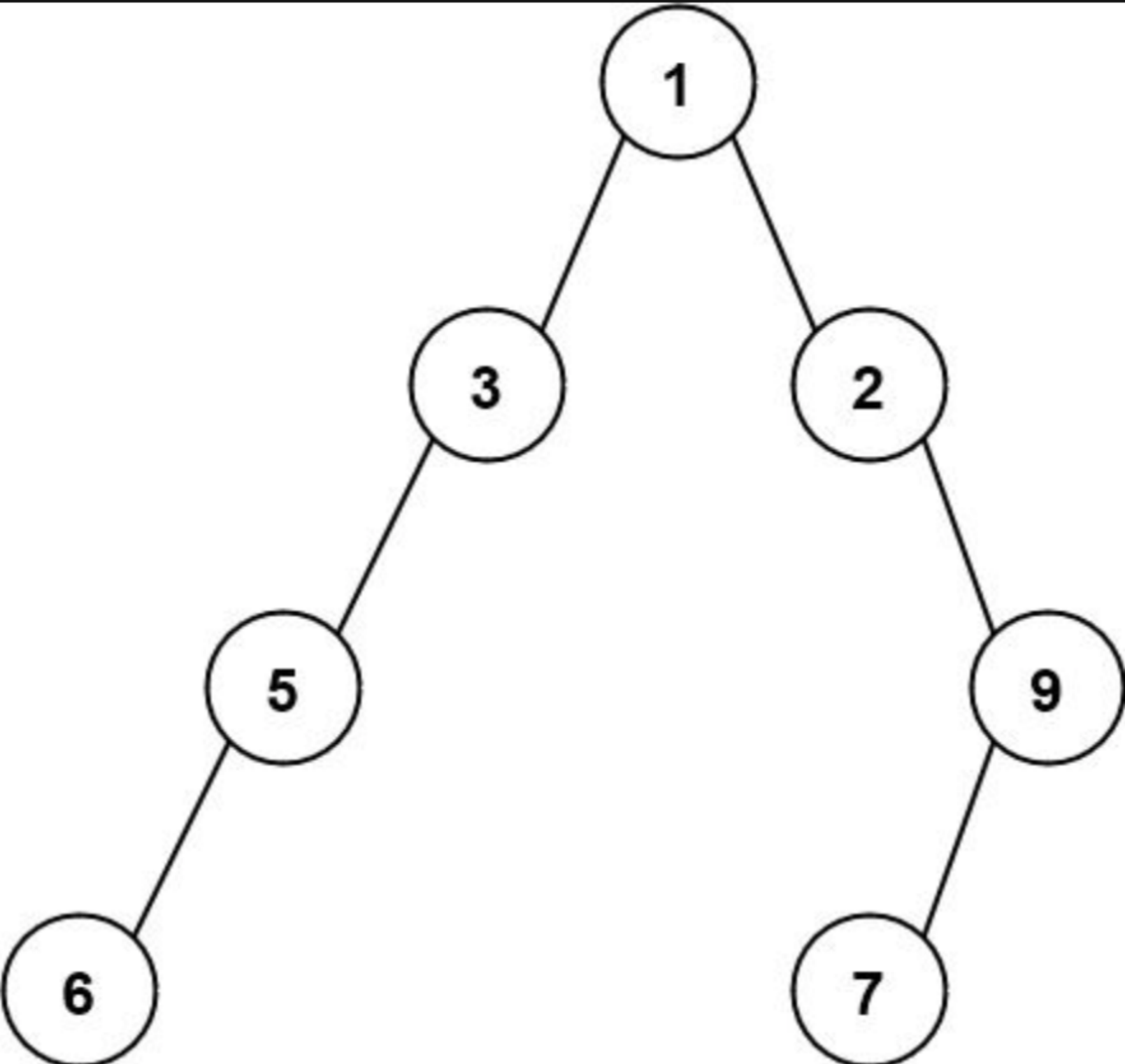
It is **guaranteed** that the answer will in the range of a **32-bit** signed integer.

### Example 1:



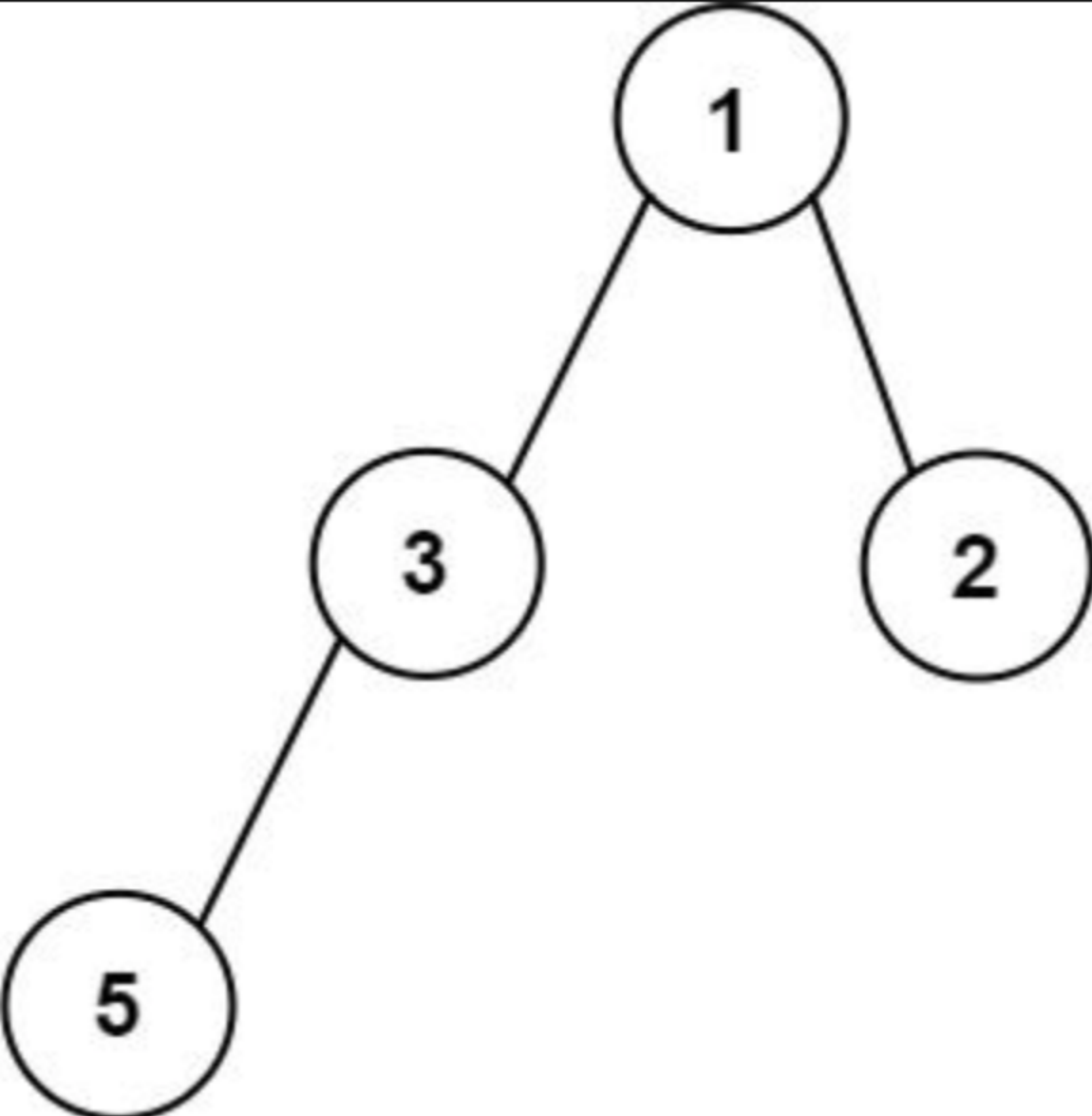
**Input:** `root = [1,3,2,5,3,null,9]`  
**Output:** `4`  
**Explanation:** The maximum width exists in the third level with length 4 (5,3,null,9).

### Example 2:



**Input:** `root = [1,3,2,5,null,null,9,6,null,7]`  
**Output:** `7`  
**Explanation:** The maximum width exists in the fourth level with length 7 (6,null,null,null,null,null,7).

### Example 3:



**Input:** `root = [1,3,2,5]`  
**Output:** `2`  
**Explanation:** The maximum width exists in the second level with length 2 (3,2).

### Constraints:

- The number of nodes in the tree is in the range `[1, 3000]`.
- `-100 <= Node.val <= 100`

