GetAhead - Interview Practice 3

Longest path in Tree

Write a function that computes the length of the longest path of consecutive integers in a tree.

A node in the tree has a value and a set of children nodes. A tree has no cycles and each node has exactly one parent. A path where each node has a value 1 greater than its parent is a path of consecutive integers (e.g. 1,2,3 not 1,3,5).

A few things to clarify:
- Integers are all positive
- Integers appear only once in the tree

Test Cases
Note that there may be other valid answers.
For the tree on the left, the length of the longest path is 2, for that on the right, it's 4