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Assignment 5

Exercise 1:
(a) Which node is the root node?
R

(b) Which node is the parent of node 'L'?
A

(c) Which node(s) is (are) the child(ren) of node 'E'?
S

(d) What is the length of the path between nodes 'R' and 'K'?
2

(e) Which node(s) is (are) leaf node(s)?
'S', 'L', 'K'

(f) What is the preorder traversal of this tree?
R, E, S, A, L, K

(g) What is the inorder traversal of this tree?
A, E, K, L, R, S

(h) What is the postorder traversal of this tree?
S, E, R, L, K, A

Exercise 2:
$T(n) = 15T(n/3) + n^5 + n^3 + n + 1$

$a = 15, b = 3, d = 5$

$5 > \log_b a = 2.464$

$=> O(n^5)$