The order of growth of the number of steps needed to encode the most frequent symbol in the alphabet described in Exercise 2.71, where the relative frequencies of symbols are 2^n where n starts at 0, is $\Theta(1)$. This is because the most frequent symbol is always a leaf node that is a child of the root node, which means the number of steps to traverse the tree from root to leaf will be the same no matter the size of n (number of total leaf nodes in tree).

The order of growth of the number of stepts to encode the least frequent symbol is $\Theta(n^2)$. The number of steps to check whether the symbol is in each node (`choose-branch`, which calls `element-of-set?`) is roughly n where n is the number of symbols in said node. Starting from the root node and traversing the tree to reach the least frequent symbol, the `element-of-set?` procedure is called once on a branch with $n - k$ symbols where k is the level of the tree, which requires $n - k$ many steps, and once on a leaf node which always requires only 1 step. Incrementing n by one yields another level with n many steps. The total number of steps involved with `choose-branch` thus grows as n^2 because there will be n many levels where `element-of-set?` invokes up to n many steps.