35.1-4

(1) Compute *depth*(*v*) for each vertex $v \in V$.
(2) Use integer-sort to sort all vertices in *V* according to their depths by decreasing order.
(3) for each $v \in V$
        color[*v*] ← white;
    for each $v \in V$
        if (color[*v*] = white) and (parent[*v*] != null) then
            color[parent[*v*]] = black;
    Answer: those vertices *v* with color[*v*] = black

Time analysis:
(1) $O(n)$
(2) $O(n)$
(3) $O(n)$
So total time complexity = $O(n)$

Correctness:
(1) If a vertex *v* is not chosen, we'll choose *v*'s parent (if exists) to cover that edge.
(2) All leaves are not chosen by the algorithm.
    Instead, we choose leaves' parents, which makes better situation compared to choosing leaves.

PS:
如果每次都選最大 degree 的 node，這是不對的。
以下圖爲例，如果一開始就選了紅色的點(degree 最大)，那至少還要選另外四個藍色點才能 cover 所有的 edge，但最少可以只要四個白色點就夠了。