```
1: Input tree f
2: Input max_depth
3: for d = (\max_{d} d = 1) : 0 do
       sub trees = Traverse(f; depth = d)
       for all sub trees do
5:
          if \sum leaf expected loss \geq root expected loss then
6:
7:
              Prune to root of sub tree
          end if
       end for
10: end for
11: return pruned f.
```