

思考题 10. 22.28.

对树进行深搜, 访问到一个节点时标记它的高度, 并且记录当前节点的 l 值, l 值定义为该节点的左右子树高度之和加 1, 再用一个全局变量记录最大的 l 值, 即该树的直径, 算法如下:

```
Find D ( T );
```

```
    r = T.root;
```

```
    len = 0;
```

```
    DFS ( r, &len )
```

```
    return len.
```

```
DFS ( r, &len )
```

```
    if Node (r) =  $\phi$ :
```

```
        r.h = 1
```

```
        r.t = 1
```

```
        len = max ( len, r.t )
```

```
        return
```

```
    else:
```

```
        for e in Node (r):
```

```
            DFS ( e, &len )
```

```
        r.h = Node (r) [0].h + 1
```

```
        if r.rightson = null: right-h = 0
```

```
        else right-h = r.rightson.h
```

```
        if r.leftson = null: left-h = 0
```

```
        else left-h = r.leftson.h
```

```
        r.t = right-h + left-h + 1
```

```
        len = max ( len, r.t )
```

```
        return.
```