# 习题5 查找

5-1 C

5-2 D

5-3

答：静态查找只是查找特定元素或者检索特定元素的属性，而动态查找要在查找过程中同时插入查找表中不存在的数据元素，或从查找表中删除已存在的某个数据元素。

5-4

```
int A[n+1];
for(int i=n-1,j=0;i>j;--i)
{
    if(a[i]>0)
        continue;
    else
    {
        A[n]=A[i];
        A[i]=A[j];
        A[j]=A[n];
        ++j;
    }
}//时间复杂度为O(n)
```

5-5 B

5-6 B

5-7

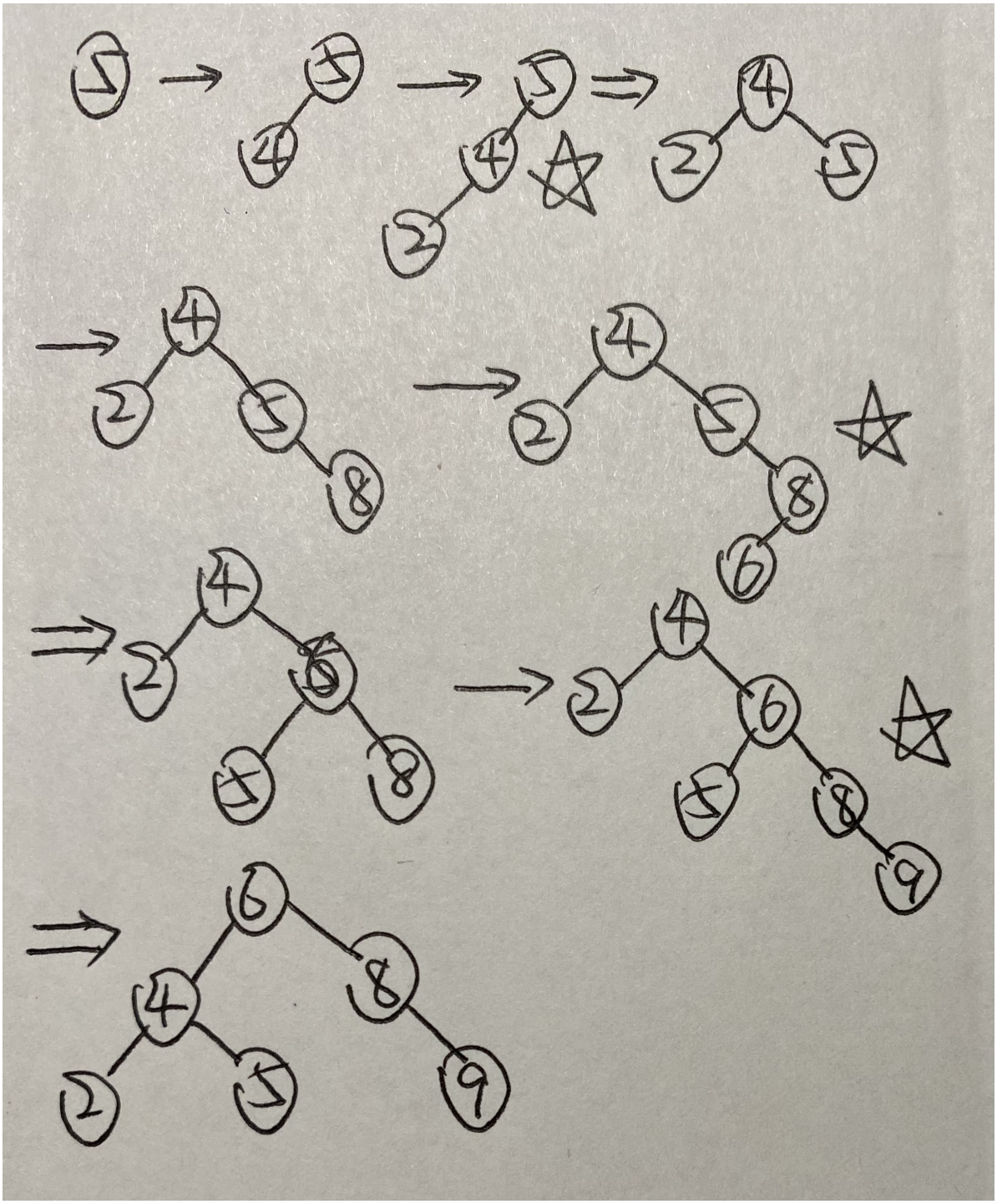
```
#include <iostream>
#include <vector>
using namespace std;
typedef struct Node
{
    int val;     //数据
    Node *left;  //左指针
    Node *right; //右指针
} Node, *Tree;
Tree root; //根节点
void insert(int val, Tree &node)
{

    if (!node) //如果结点不存在
    {
        node = new Node; //新建叶结点
        node->val = val;
        node->left = node->right = NULL; //左右置空
        return;
    }
    if (node->val == val)
        return; //不加重复的数据
```

```
    val < node->val ? insert(val, node->left) : insert(val, node->right);
    //小的向左插入，大的向右插入
}
void InOrder(Tree node)
{
    if (!node)
        return;
    InOrder(node->left);
    cout << node->val << ' ';
    InOrder(node->right);
}
int main()
{
    root = NULL;
    int n = 10;
    int num[10] = {0, 30, 20, 5, 99, 50, 80, 25, 10, 55};
    for (int i = 0; i < n; ++i)
        insert(num[i], root);
    InOrder(root);
    cout << endl;
    return 0;
}
```

5-8 C

5-9



5-10 C

5-11 A

5-12

$$ASL=\frac{1}{2}\left(1+\frac{1}{1-\alpha}\right)\leq 3$$

$$\therefore \alpha \leq 0.8$$

$$\alpha=\frac{100}{x}\leq 0.8$$

$x \geq 125$，选127