

1. 第一次: $low=0$ $high=10$ $mid = \frac{0+10}{2} = 5$

$A[5] = 55 > 9$ $\therefore high = 4$

第二次: $low=0$ $high=4$ $mid = \frac{0+4}{2} = 2$

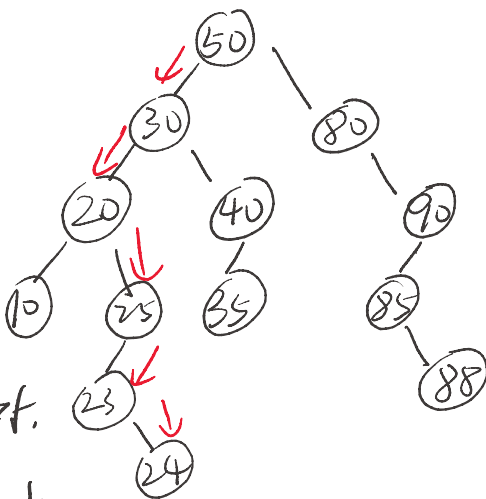
$A[2] = 30 > 9$ $\therefore high = 1$.

第三次: $low=0$ $high=1$ $mid = 0$

$A[0] = 9$ 查找成功

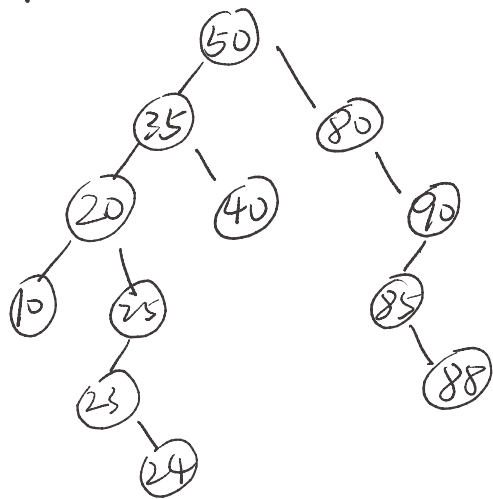
2. 插入 24.

- ① $24 < 50$. 比较左子树
- ② $24 < 30$. 比较 30 结点左子树
- ③ $24 > 20$. 比较 20 结点右子树
- ④ $24 < 25$. 比较 25 结点左子树.
- ⑤ $24 > 23$. 插入 23 结点右子树

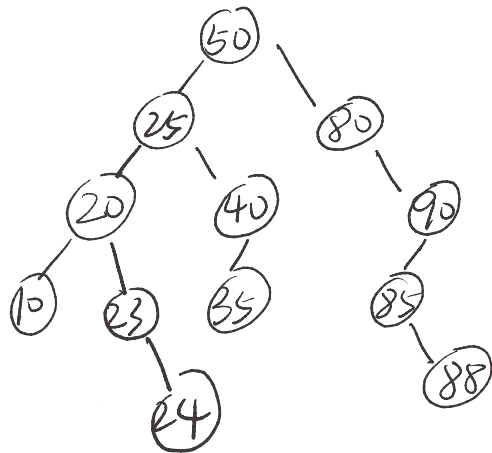


删除结点30:

情况一:



情况二:



3.

$$H(22) = 22 \bmod 7 = 1$$

$$H(16) = 16 \bmod 7 = 2$$

$$H(43) = 43 \bmod 7 = 1 \text{ 冲突} \Rightarrow 3$$

$$H(52) = 52 \bmod 7 = 3 \text{ 冲突} \Rightarrow 4$$

$$H(62) = 62 \bmod 7 = 6$$

	22	16	43	52		62
0	1	2	3	4	5	6

$$ASL = \frac{1+1+3+2+1}{5} = 1.6$$

