```
       0  1  2  3  4  5   6  7  8  9  10                    (l, r)
      {5, 7, 3, 2, 4, 1, 5, 3, 1, 6, 4}                    i → v
```
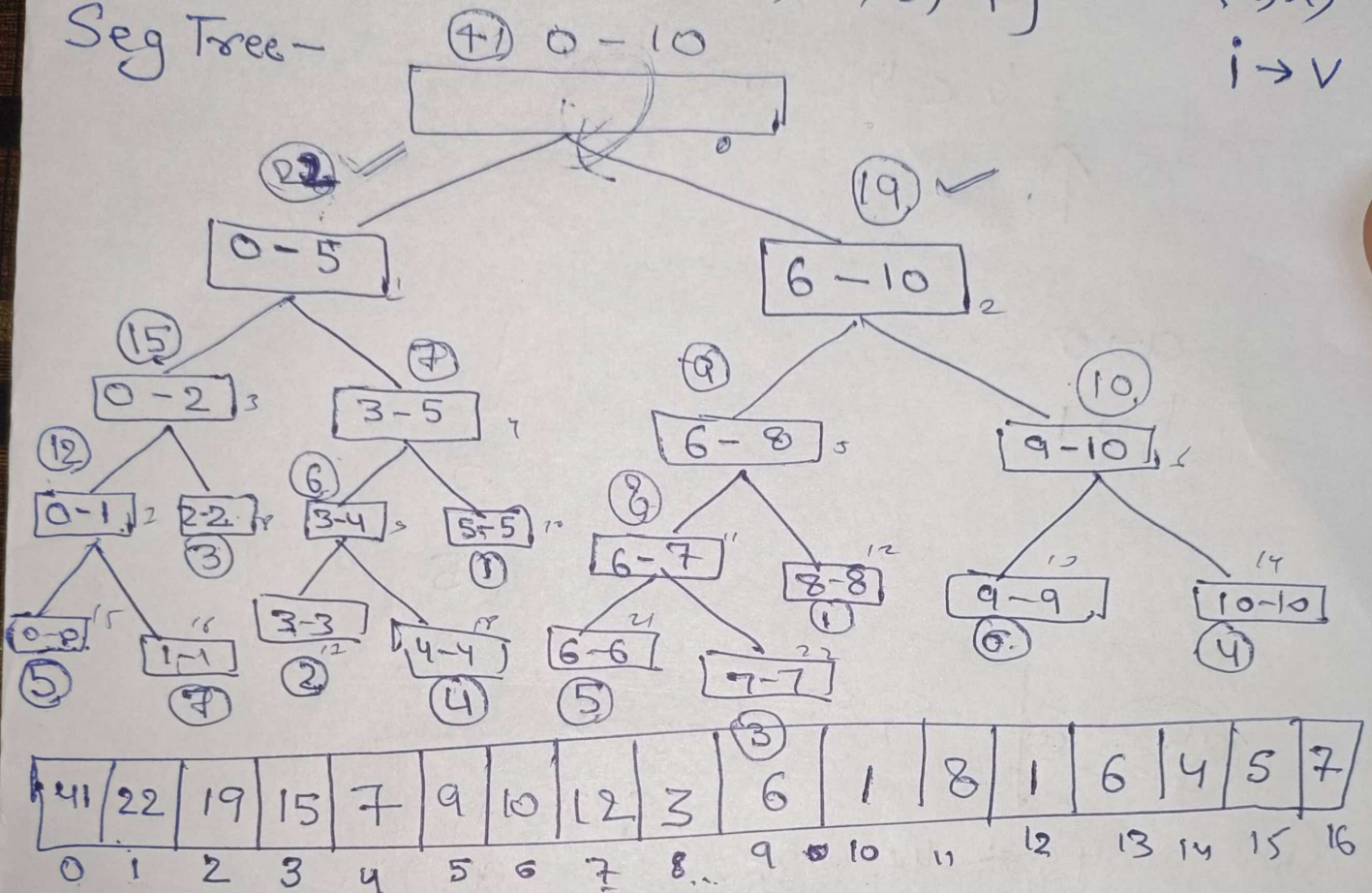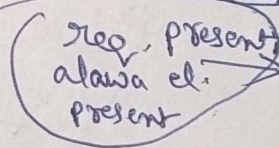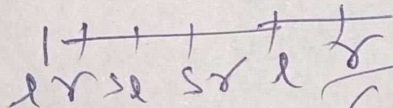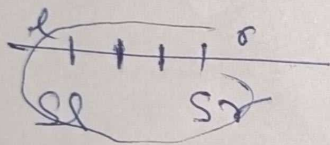
Seg Tree —   ④ 0 - 10


```
        ㉒                              ⑲
       [0-5]₁                         [6-10]₂

    ⑮         ⑦                    ⑨              ⑩
  [0-2]₃    [3-5]₇              [6-8]₅          [9-10]₆

⑫                   ⑥                  ⑧
[0-1]₂  [2-2]₄   [3-4]₉  [5-5]₁₀    [6-7]₁₁   [8-8]₁₂    [9-9]₁₃   [10-10]₁₄
         ③         ①        ①                    ①        ⑥          ④

[0-0]₁₅  [1-1]₁₆  [3-3]₁₇  [4-4]₁₈   [6-6]₂₁            
  ⑤        ⑦        ②        ④       [7-7]₂₂
                                       ⑤
                                      ③
```

41	22	19	15	7	9	10	12	3	6	1	8	1	6	4	5	7
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

D	D	2	4	D	D	5
17	18	19	20	21	22	23

$(arr, 0, n-1, Seg, 0)$

3	D	D	D	D
24	25	26	27	28

(arr, l, r, Seg, Si) {

  if $(l == r)$ { $Seg[Si] = arr[l]$ return }

  mid = $(l + r)/2$

  lc = $(arr, l, mid, 2 \times Si + 1)$

  rc = $(arr, mid+1, r, 2 \times Si + 2)$

  $Seg[Si] = lc + rc$

(6-10) 16

7→ 41

(0-5)

0→ 22 9 ↑ (6-10)

19

(0-2) 15 ↑⑦ 7 3-5 19 ↖⁰

3-4 6 5-5 6-8 10 (9-10)

0-1 12 (2-2) 3 8 1 (9-9)⑥ (10-10)④

(6-7) 8-8

0-0 ⑤ 1-1 ⑦ 3-3 2 6-6 5 4-4 4 3 5 8

3 S 8
3/l Sl Sr T

l —+—+—+—+— σ
Sl   Sr

l —+—+—+—+—+— σ
l r >l Sr l r

(3-8)

reg. present
alawa el.   Partial ov.
present   compl. ov.
                   no. ov.

$$\left(\begin{array}{c}3,8\\ l, r, \boxed{0}, \stackrel{0,10}{Si}, Sl, Sr, Seg\end{array}\right)\{$$

$$mid = (Sl + Sr)/2$$

$$lc = S(l, r, 2\cdot shf+1, Sl, mid, Seg)$$

$$rc = S(l, r, 2\cdot sr+2, mid+1, Sr, end)$$

return lc + rc;

(0-10)

(41) → [46]

(6-10) → [24]

(0-5)

(22)

(6-8)

(0-2)

(3-5)

[14] ← (9)   (9-10)

(15)

(7)

(6-7)   (18-8)

(10)

[13] ← (8)   (1)

(2-2)

(0-1)

(3)

(3-4)

(5-5)

(6)

(1)

(10-10)

(12)

(9-9) (6)

(4)

(0-0)

(1-1) (2) (3-3)

(4-4)

(6-6)

(7-7)

(5)

(7)

(4)

(5)   (3)

[10]

[6] → 10

diff = 10 - 5

= [5]