

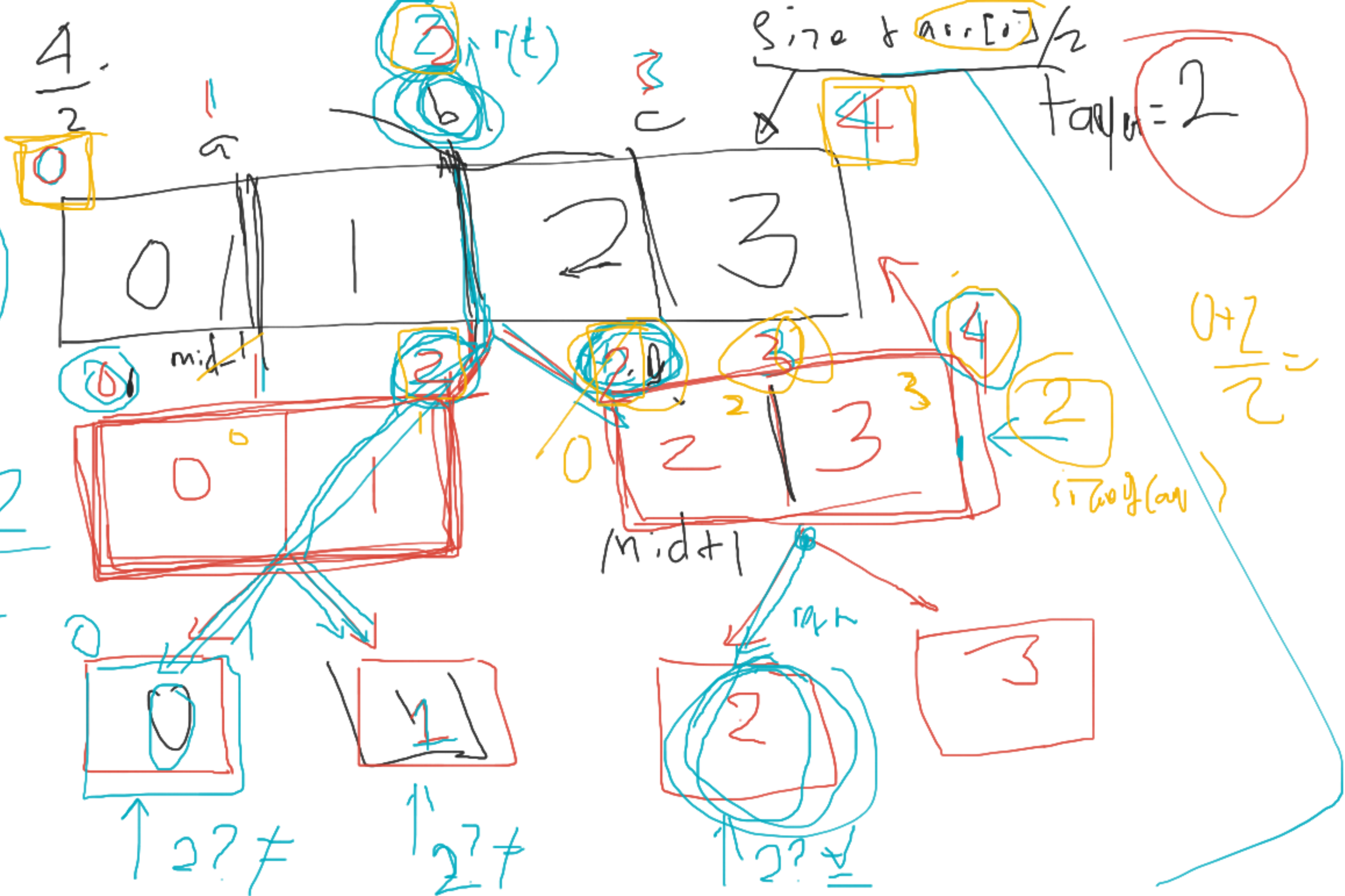
$$mid = \frac{4}{2}$$

$\sin \theta \approx \frac{\text{opp}}{\text{hyp}} = \frac{4}{5}$   
 $\theta = \sin^{-1} \left( \frac{4}{5} \right)$

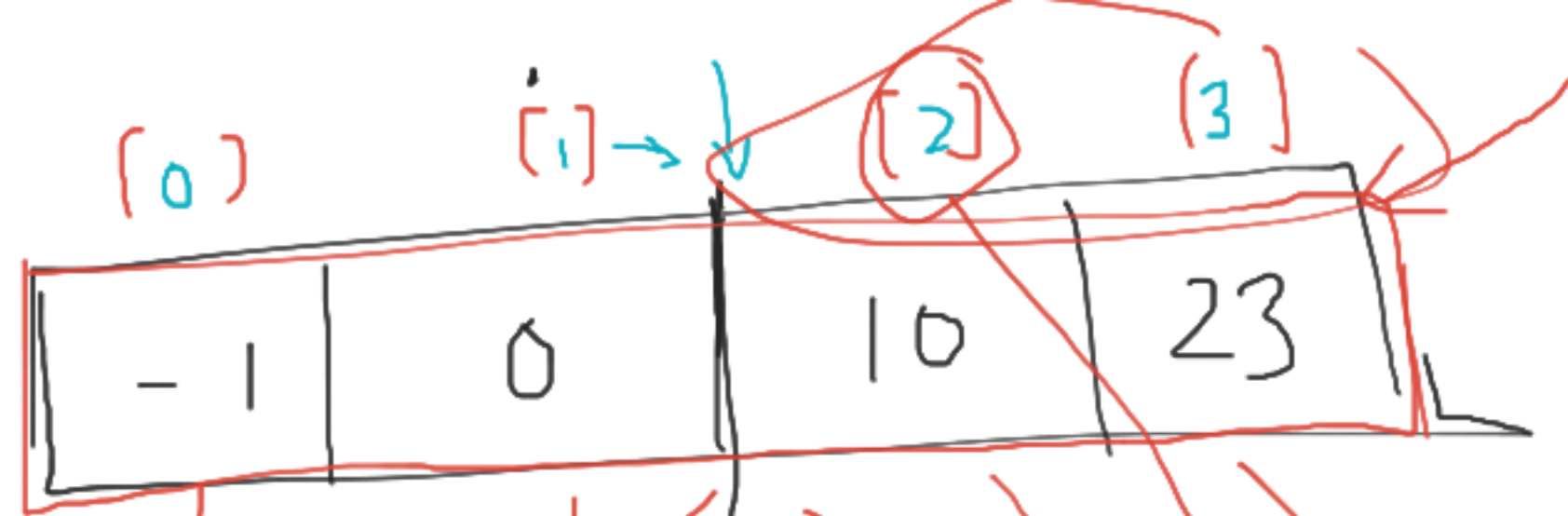
$$\frac{0+2}{2} = 1$$

$$3 = \frac{4+2}{2}$$
$$= 3$$

$$\frac{2+0}{2} = 1$$



$$\text{mid} = \frac{3}{2} = 1$$

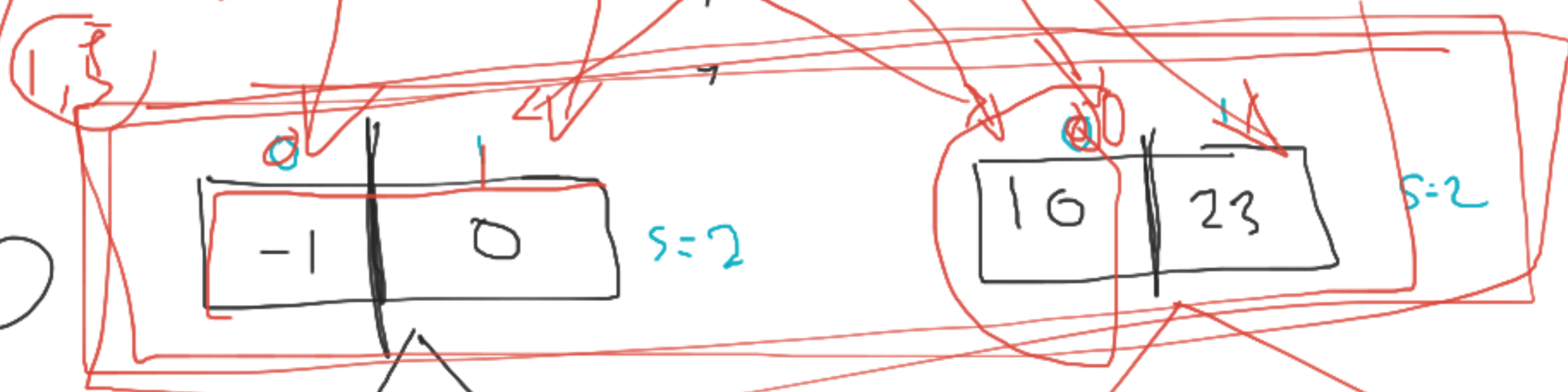


-1

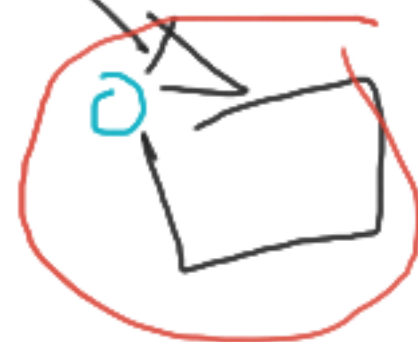
size: 4

nums 10

$$\text{mid} = \frac{1}{2} = 0$$



$$\text{mid} = \frac{0}{2} = 0$$

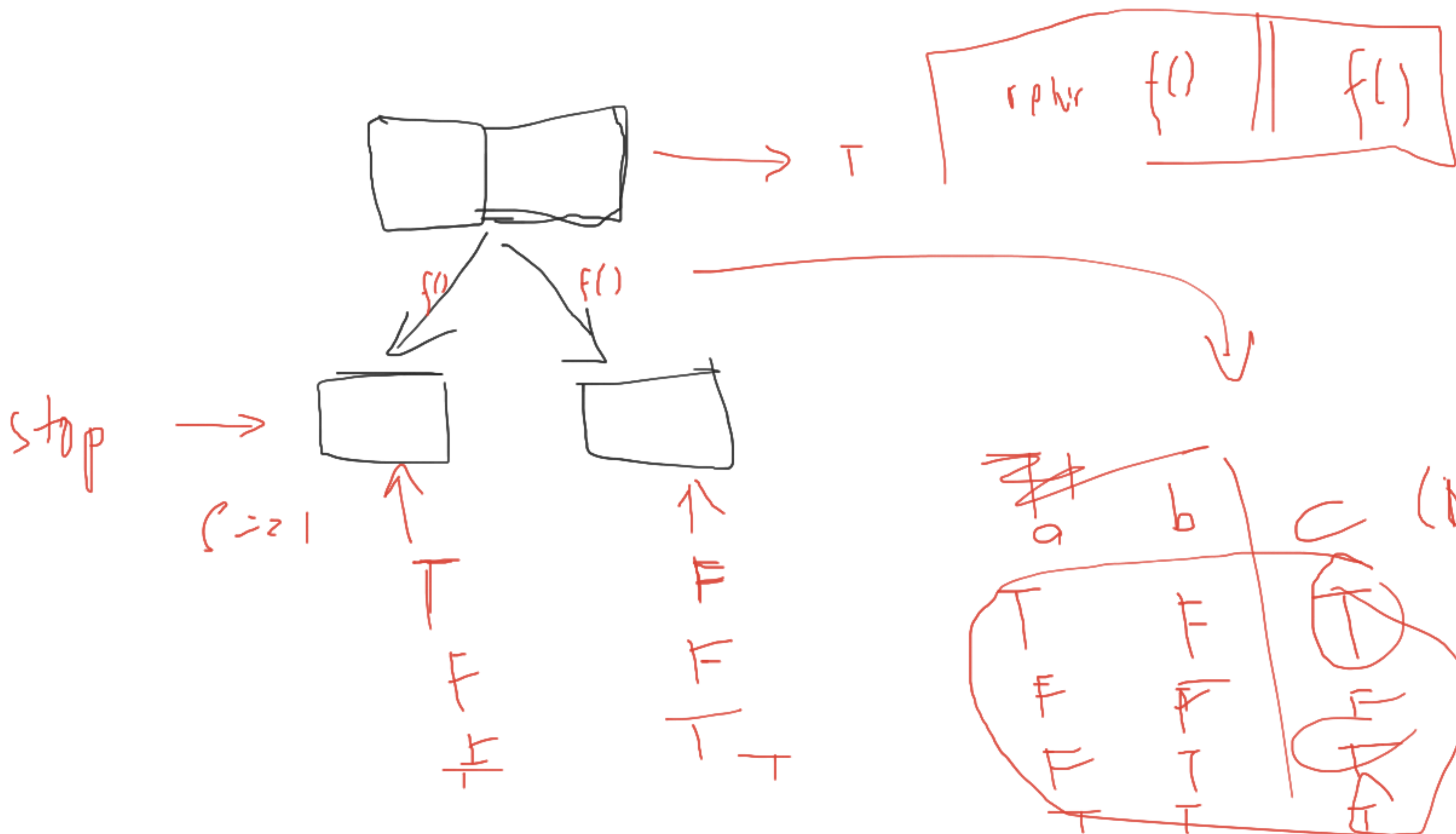


s=1



$\text{sizeof}(x) / \text{sizeof}(x[0])$

$\text{sizeof} \frac{*x}{\text{sizeof}(x[0])} = 8 \text{ byte}$







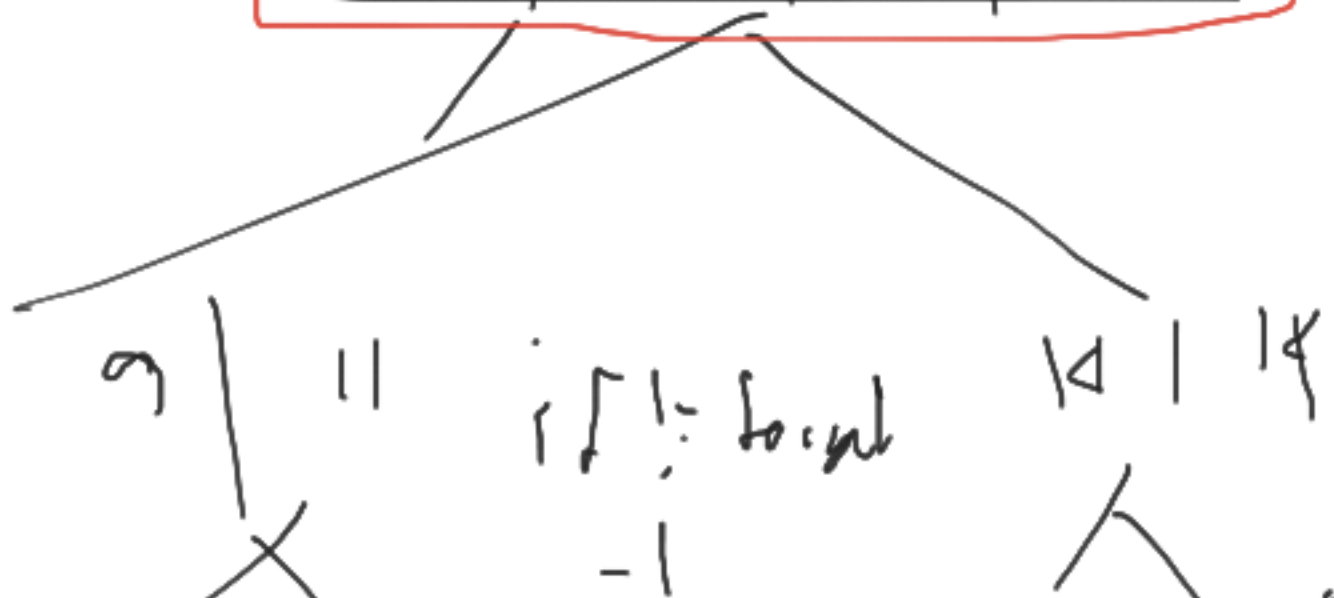
5

Minimum target

0	1	2	3
9	11	14	14

14

0	1	2	3
0	9	9	12



0	1
9	9

9

0	1
10	5

0	1
9	12

9: target 11



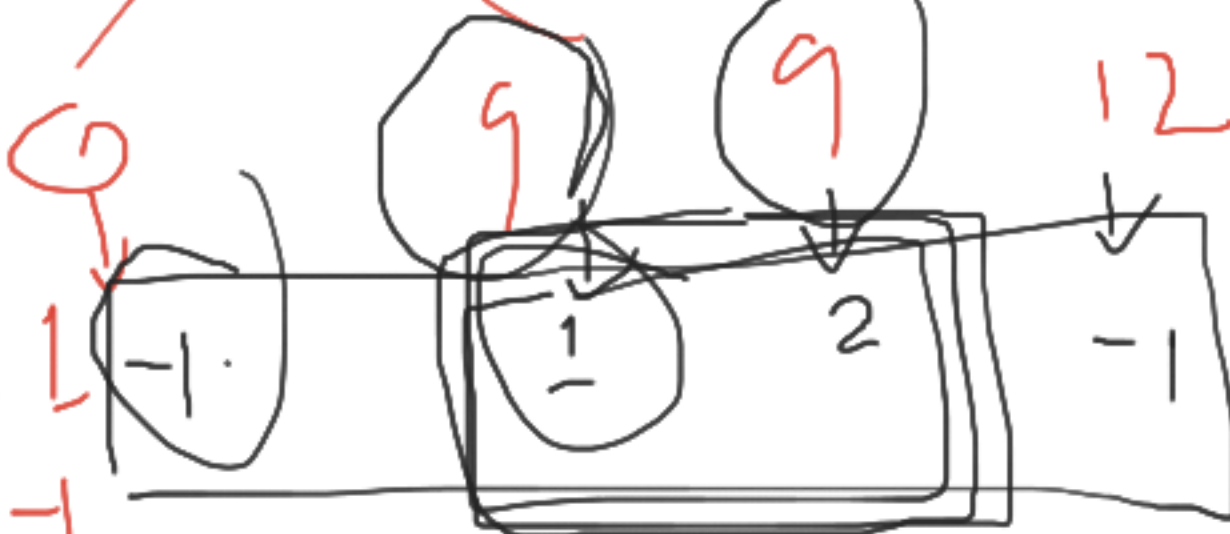
2	3
14	14

if (x != 0) x = 0

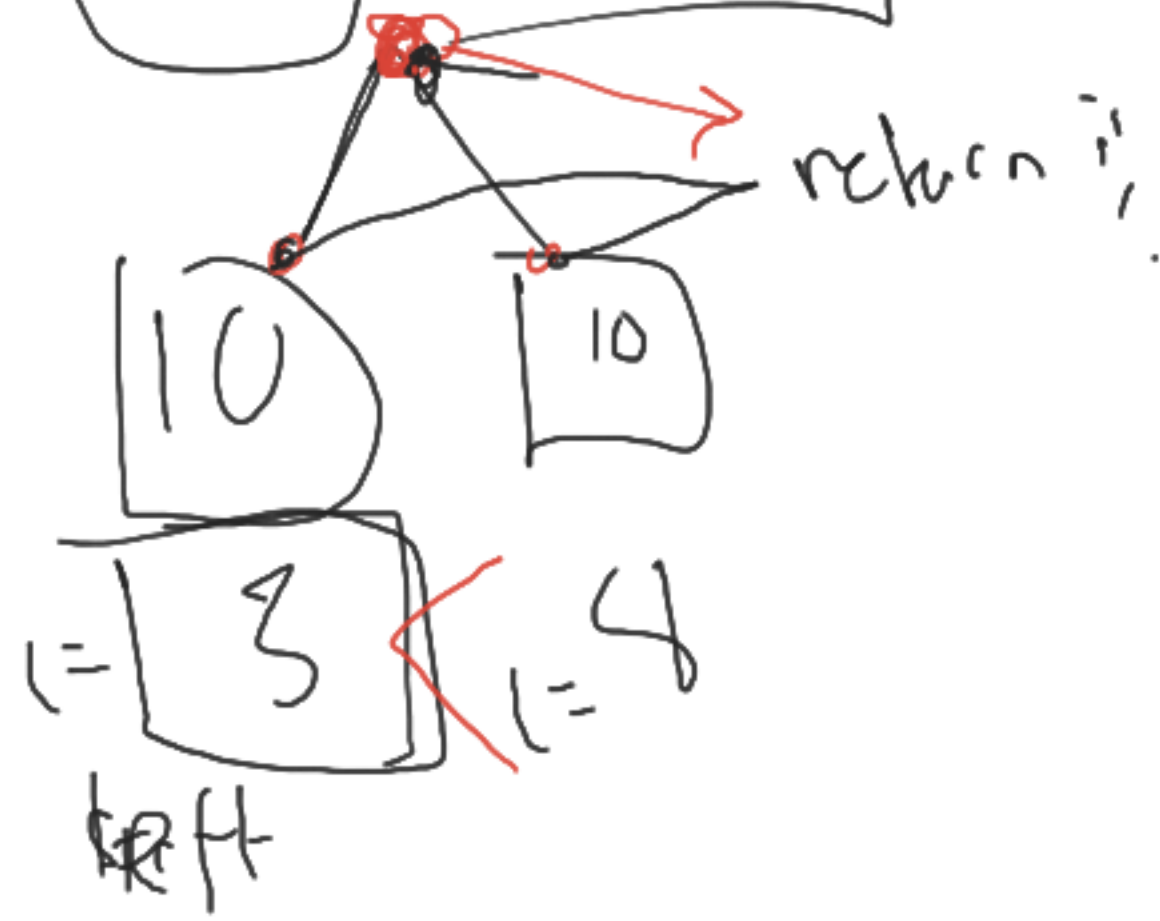
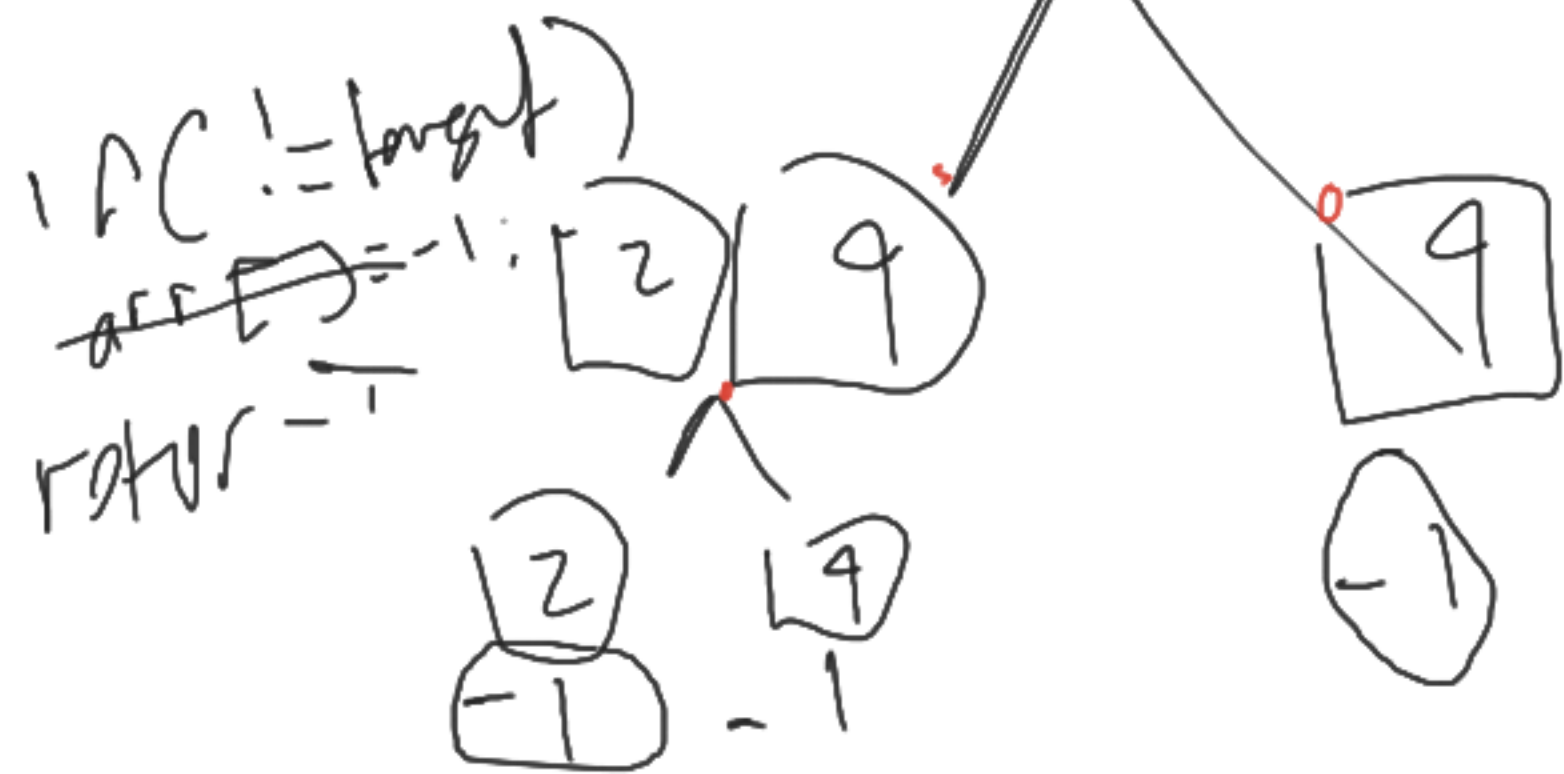
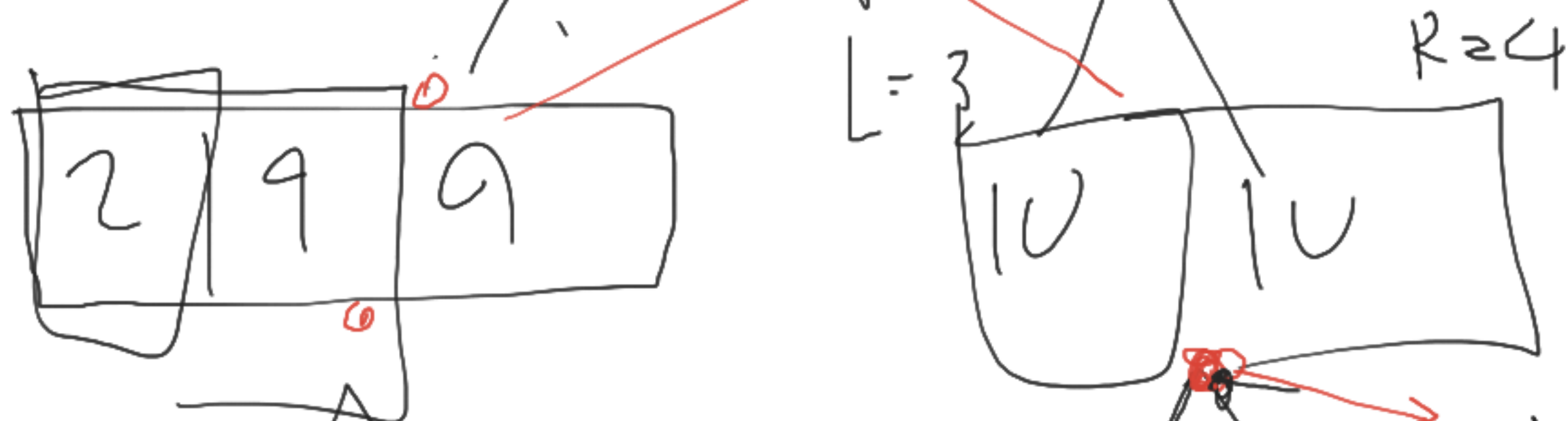
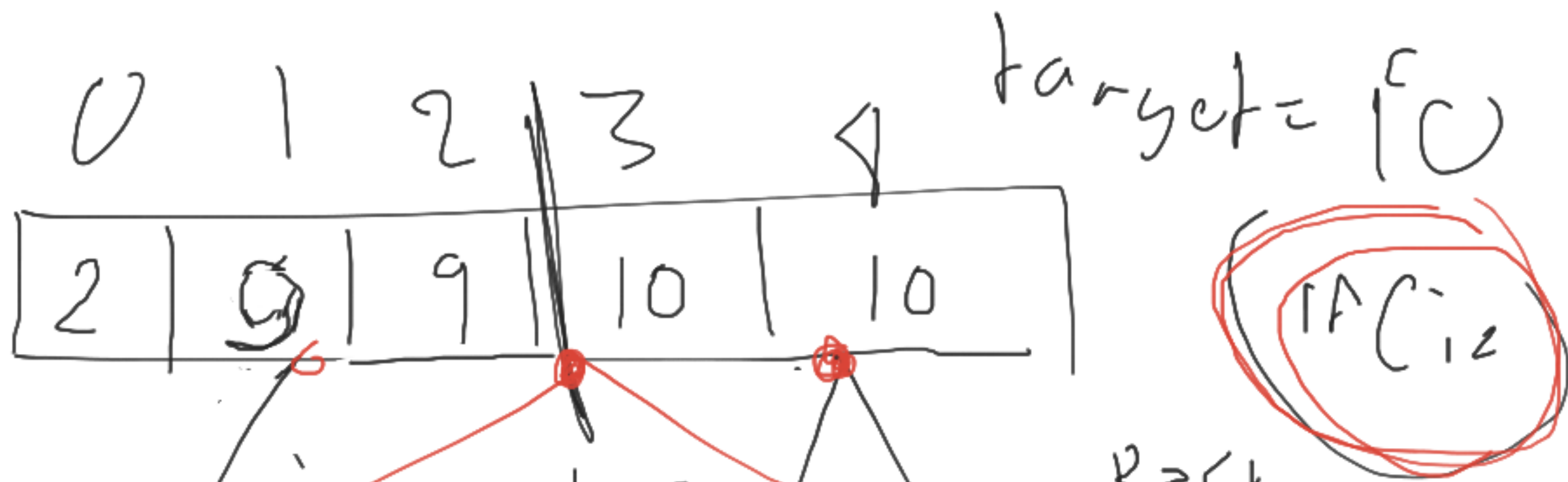
-1 -1

if (x != -1)

f(x) = 1  
x = 1



(x < y) = x  
else y

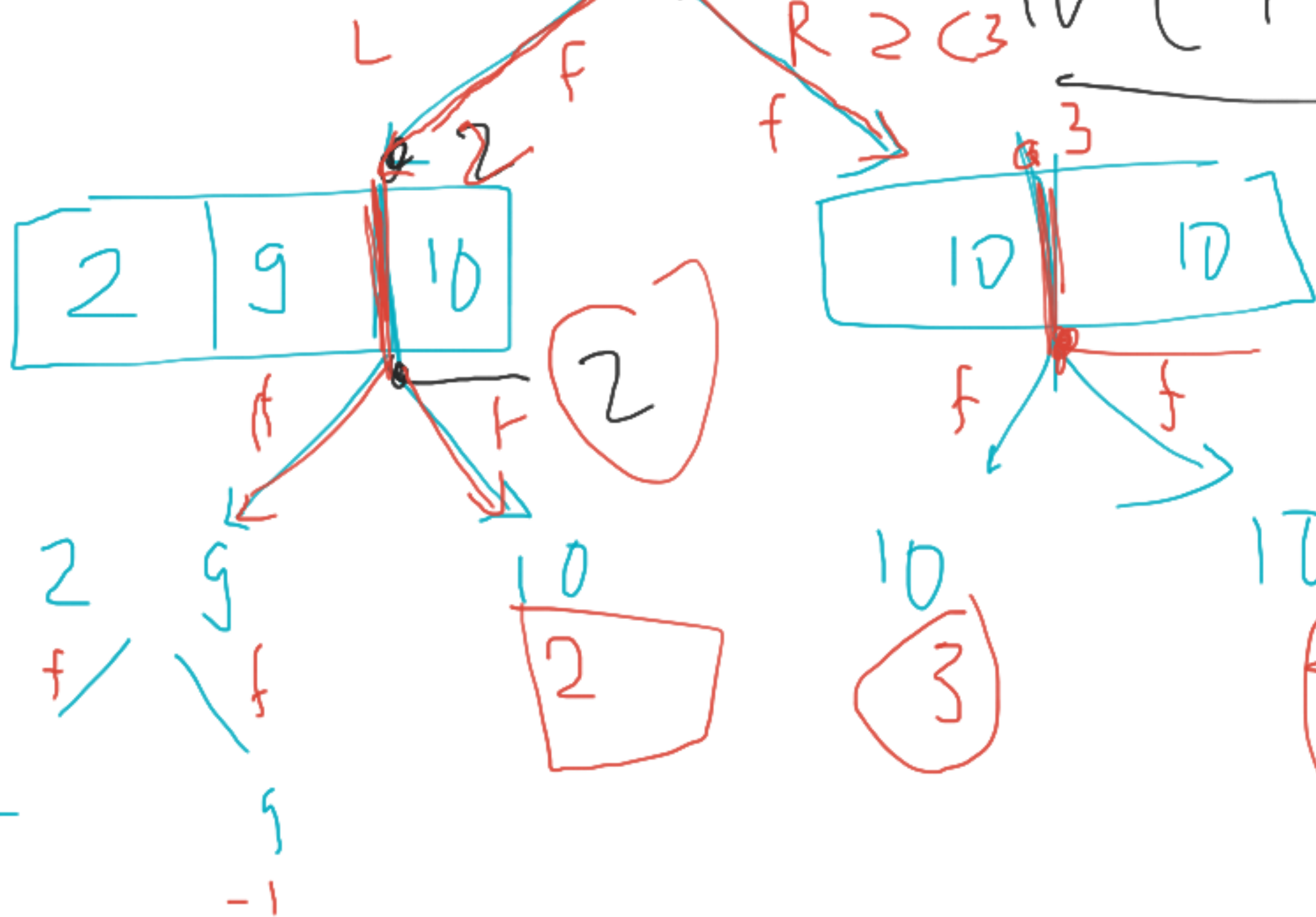


Mid < front  
 binary search kann  
 Mid > left  
 binary search bis

T = 10

0	1	1=2	3	4
2	9	10	10	10

10 (i < i+1)



3 < 4 → 3



$f(x) \{$

$f(x-1) -$

$\text{print}(x) \times x$

$f(x-2) -$

```
int fraktal_B(int x) {  
  int i;  
  if (x <= 0) return 0;  
  else {  
    int bintang = x;  
    bintang += fraktal_B(x - 1);  
    bintang += fraktal_B(x - 2);  
    return bintang;  
  }  
}
```

$f(3)$

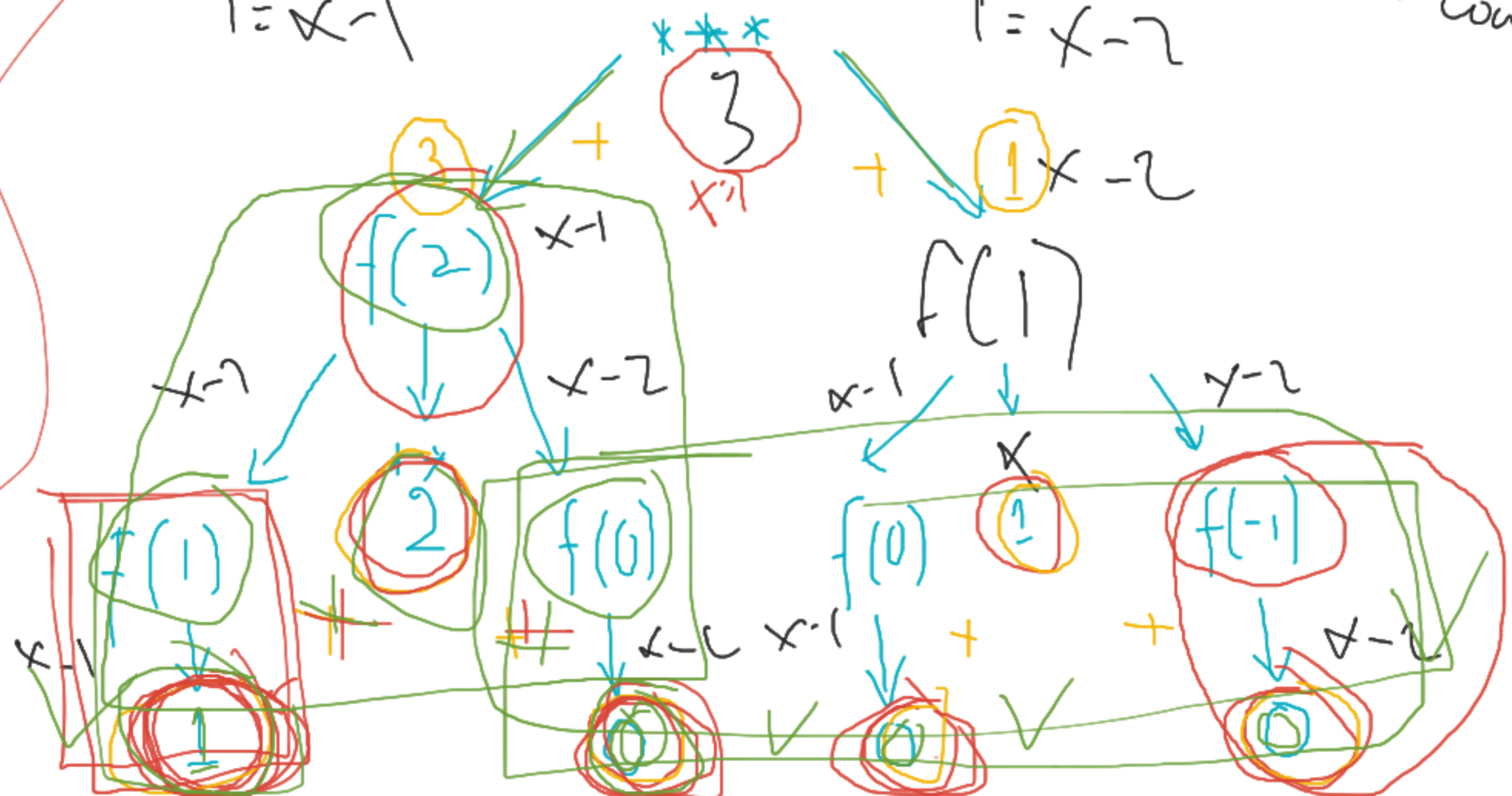
$i += x_i$

$\sum ?$

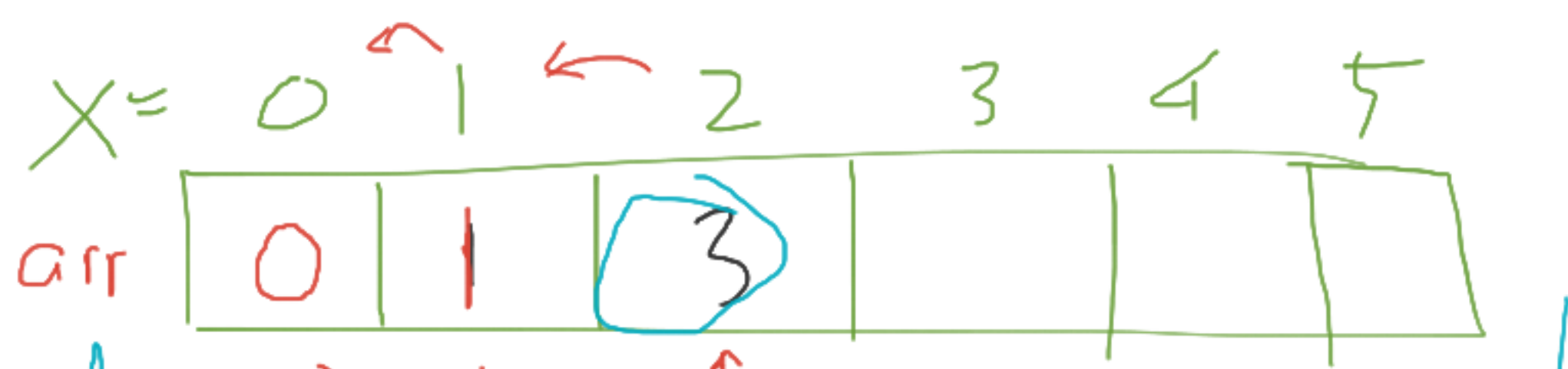
Variable Count?

$i = x - 1$

$i = x - 2$



$x <= 0$



$$\text{arr}[0] + \text{arr}[1]$$

$$f(2)$$

$$f(1)$$

$$f(0)$$

memo[x] =

$$f(2) = \text{arr}[0] + \text{arr}[1]$$

$$f(2) = f(1) + f(0)$$

$$f(2) = \text{arr}[0] + \text{arr}[1]$$

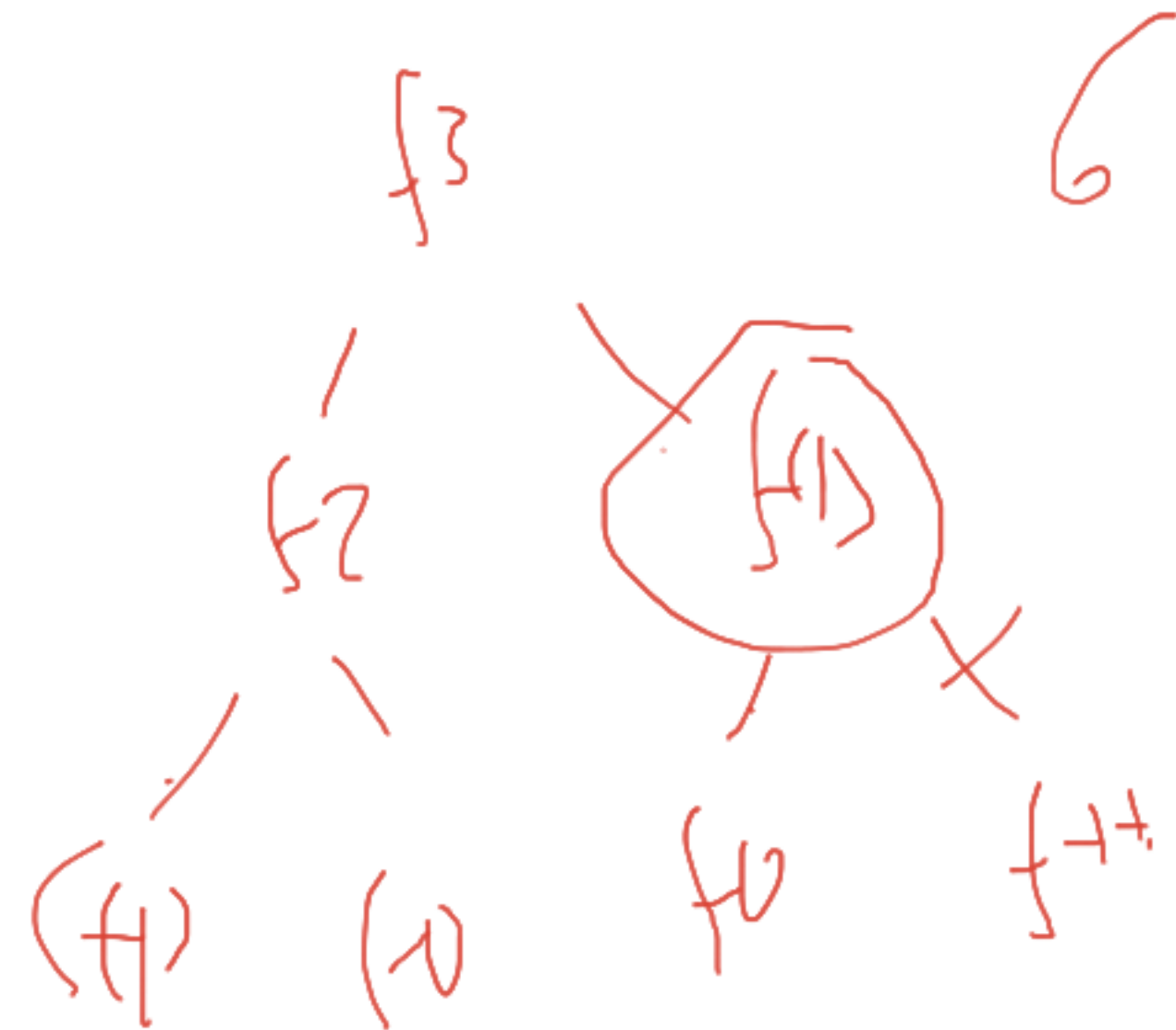
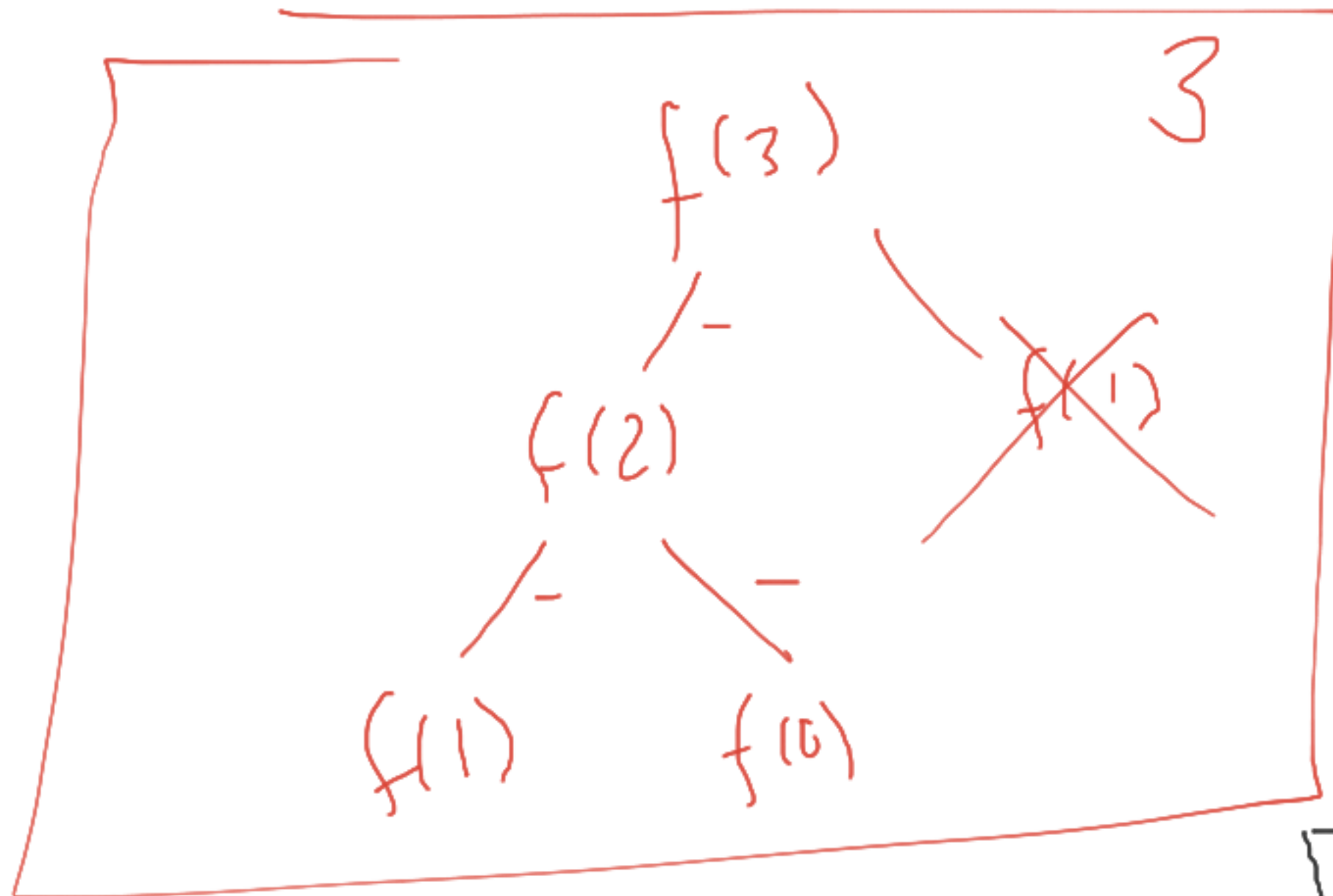
$$\text{if } (\text{arr}[x] \neq 0)$$

+ other arr[x]

else {

$$f(x)$$

}



① Dynamic Programming

Memorization

80  
1.1





$f(7)$

|||||



$f(7-2)$

$x=7$   
 ~~$f(x)$~~



$f(7-1)$   
 $f(6)$  6\*

$f(6-1)$   
 $f(5)$

~~scribble~~

$f(6-2)$   
 $f(4)$

2\* 3\* 2\*

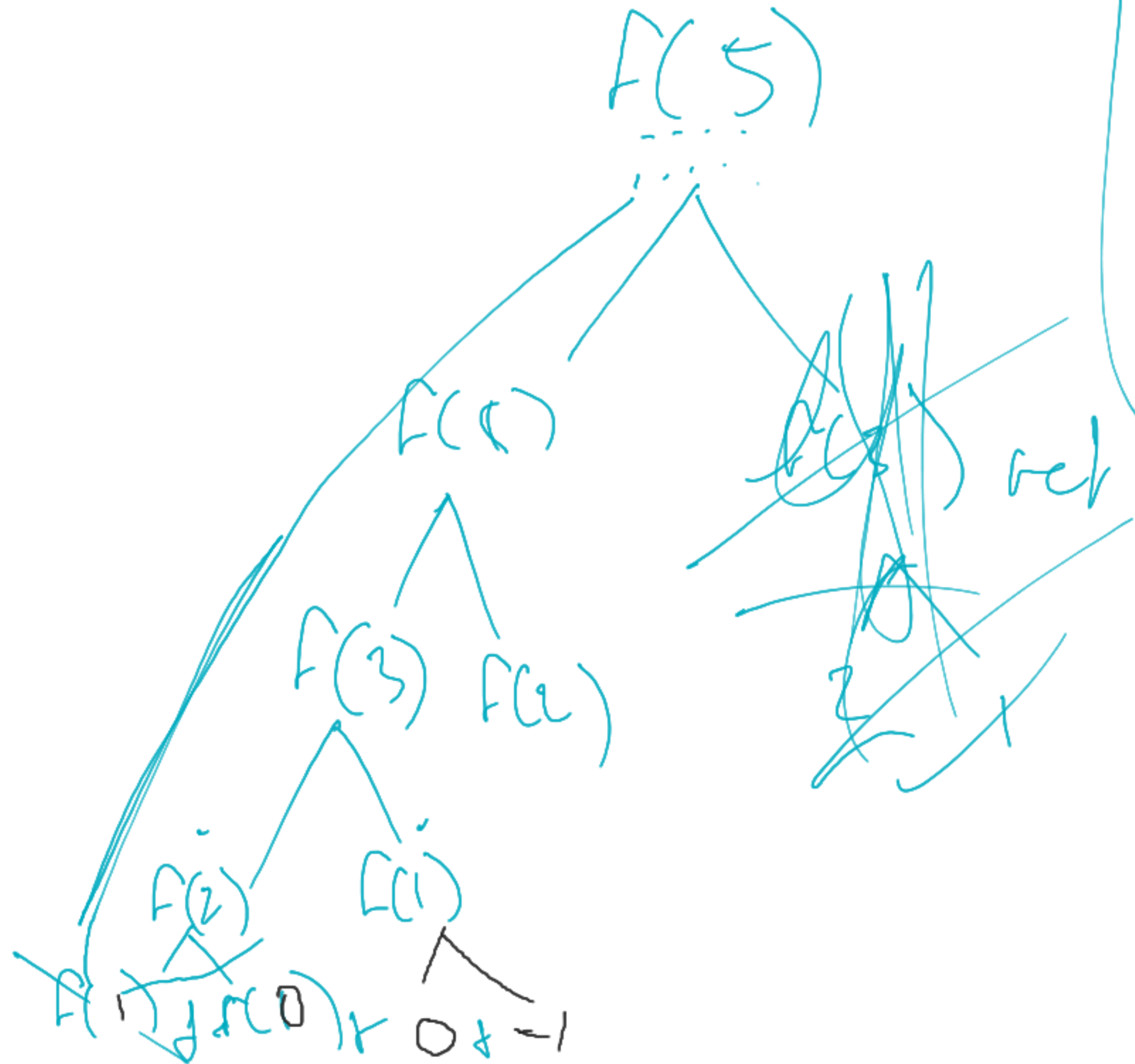


~~$f(5)$   
-1 -2  
 $f(4)$   $f(3)$~~

$-1$   $-2$

f





$F(0)$	$F(1)$	$F(2)$	$F(3)$	$F(4)$	$F(5)$
0	1	2	3	5	8

Dynamic Programming