

Ques: Generate Parentheses

$n=2 \rightarrow 2$ opening bkt s & 2 closing bkt s .

| | | | |
|---------|---------|---------|---------|
| () () | (()) |)) ((| ()) (|
| ✓ | ✓ | ✗ | ✗ |

$n=3$

() () () () (()) (()) () ((())) (() ())

Ques: Generate Parentheses

$n=1$ ()

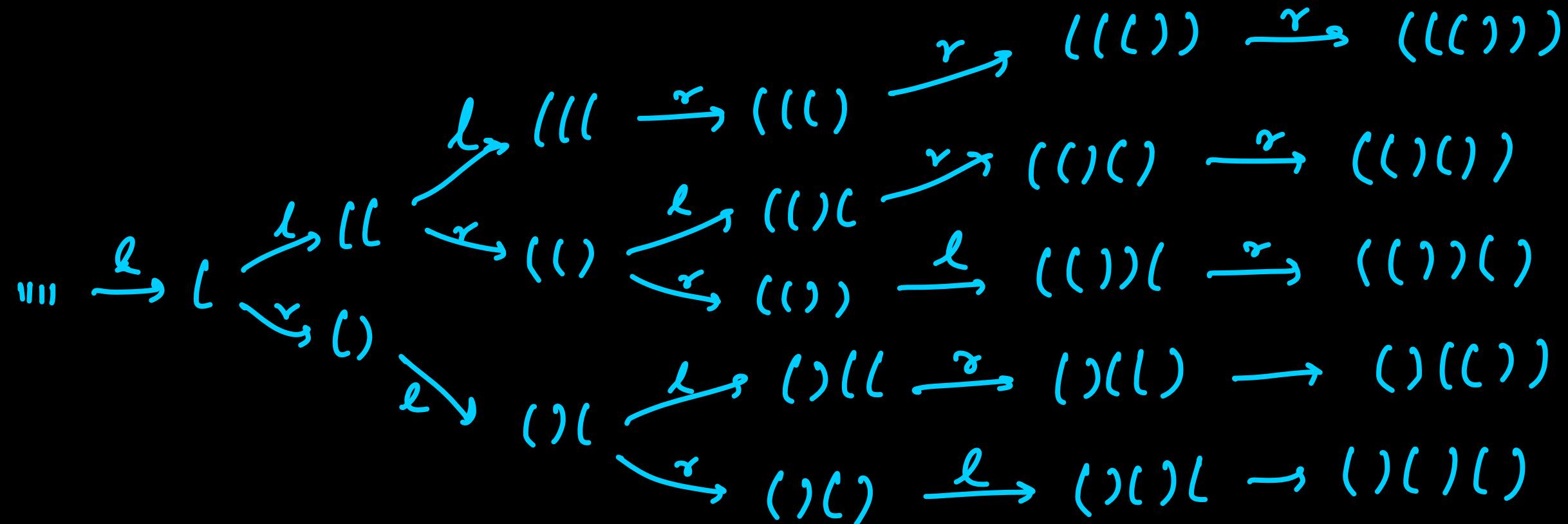
$n=2$ ()() (())

$n=3$ ()(()) (()()) ()(()) (()()) (())()

Hint: No. of left brackets
No. of right brackets

Ques: Generate Parentheses

η=3



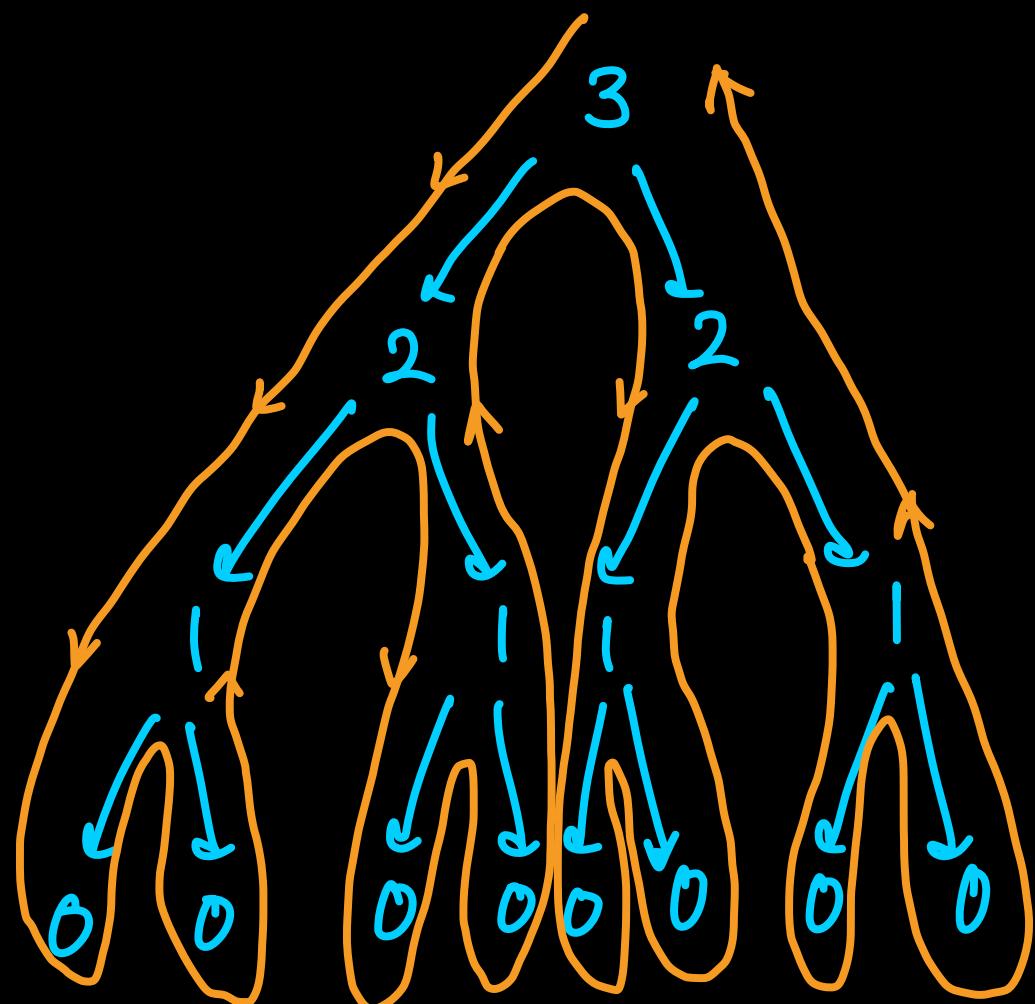
$n=3$

Pre In Post

Euler's tour tree

Pre 3

Pre 2

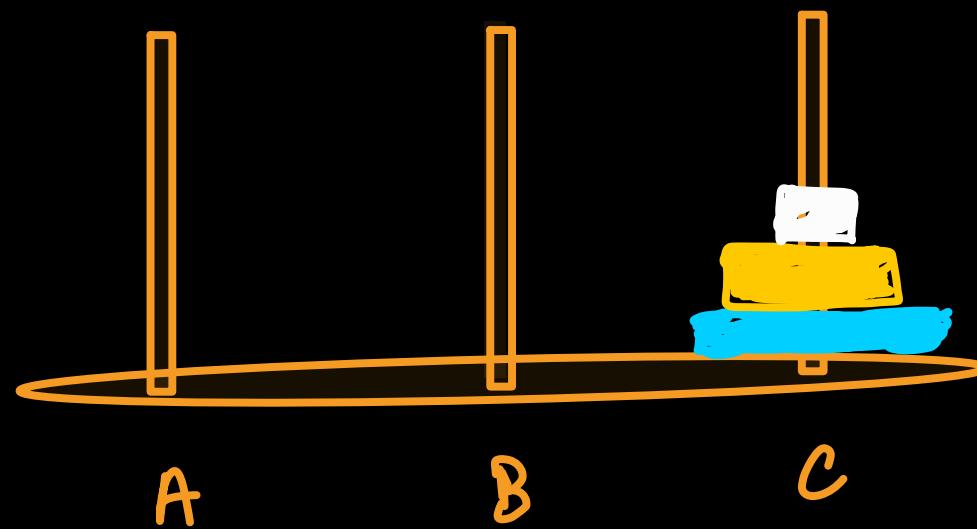


```

void pip(n) {
    if(n==0) return;
    sout(n);
    pip(n-1);
    sout(n);
    pip(n-1);
    sout(n)
}
  
```

Ques: Tower Of Hanoi

n disks from A to C via B



- n-1 disks from A to B via C
- largest disk from A to C
- n-1 disks from B to C via A

Ques: Look and Say Pattern $n=6$

| | |
|---|---------------------|
| 1 | 1 |
| 2 | 1 1 |
| 3 | 2 1 |
| 4 | 1 2 1 1 |
| 5 | 1 1 1 2 2 1 |
| 6 | 3 1 2 2 1 1 |
| 7 | 1 3 1 1 2 2 2 1 |
| 8 | 1 1 1 3 2 1 3 2 1 1 |

$\text{fun}(4) = \text{padho } \text{fun}(3) \text{ ko}$

$s = 1 1 1 2 2 1$ i
 j

$\text{ans} = 3 1 2 2 1 1$