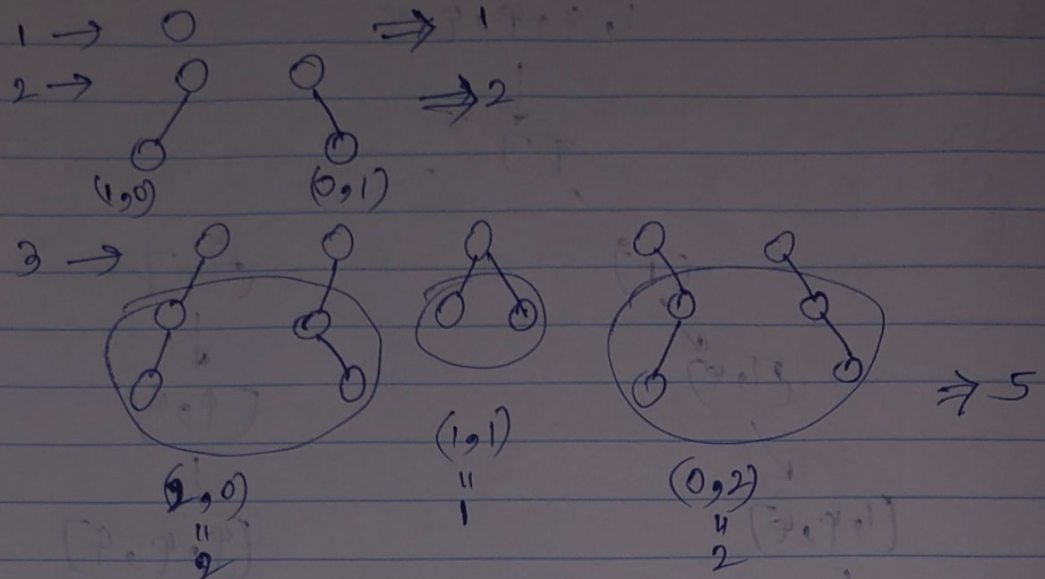
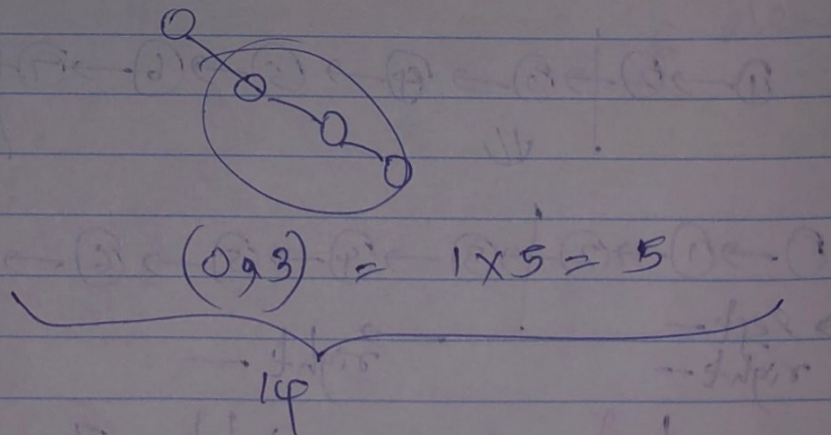
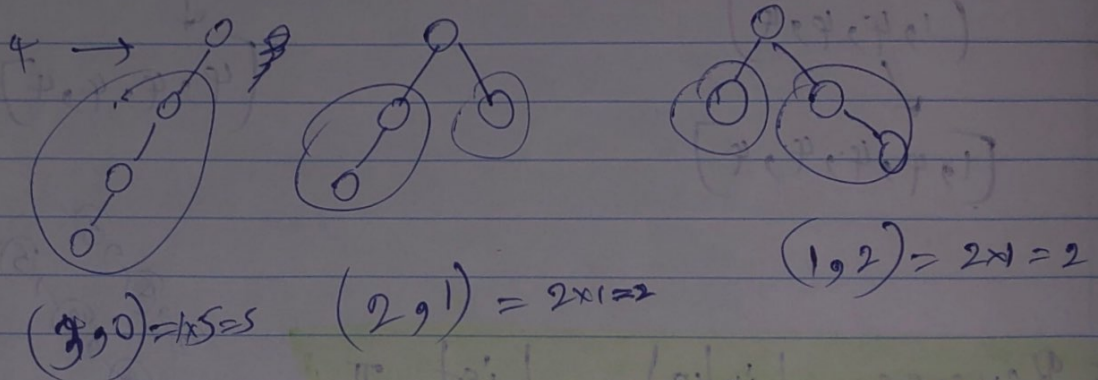


* Unique Binary Search Trees



Catalan number series → $O(n^2)$
 $O(n)$



5 →

$0,4 = 14 \times 1 = 14$	} ϕ_2
$1,3 = 1 \times 5 = 5$	
$2,2 = 2 \times 2 = 4$	
$3,1 = 1 \times 5 = 5$	
$4,0 = 14 \times 1 = 14$	

No: _____

Date: ____/____/____

store all ~~keys~~ⁱⁿ array & take multiplication
-ous & store value for relevant
of nodes.

$$\begin{aligned} f(n) = & [f(0) * f(n-1)] + [f(1) * f(n-2)] + \\ & [f(2) * f(n-3)] + [f(3) * f(n-4)] + \\ & \dots + [f(n-1) * f(0)] \end{aligned}$$