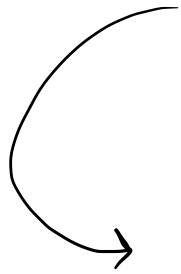


Backtracking

Permutations & Combinations

Permutations



arrangements

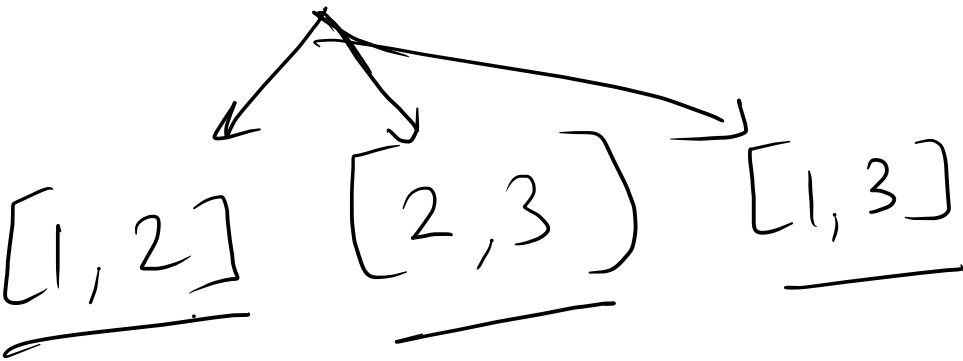
order matters

$[1, 2, 3]$

1	2	3
1	3	2
2	1	3
2	3	1
3	1	2
3	2	1

Combination of size $k=2$

$[1, 2, 3]$



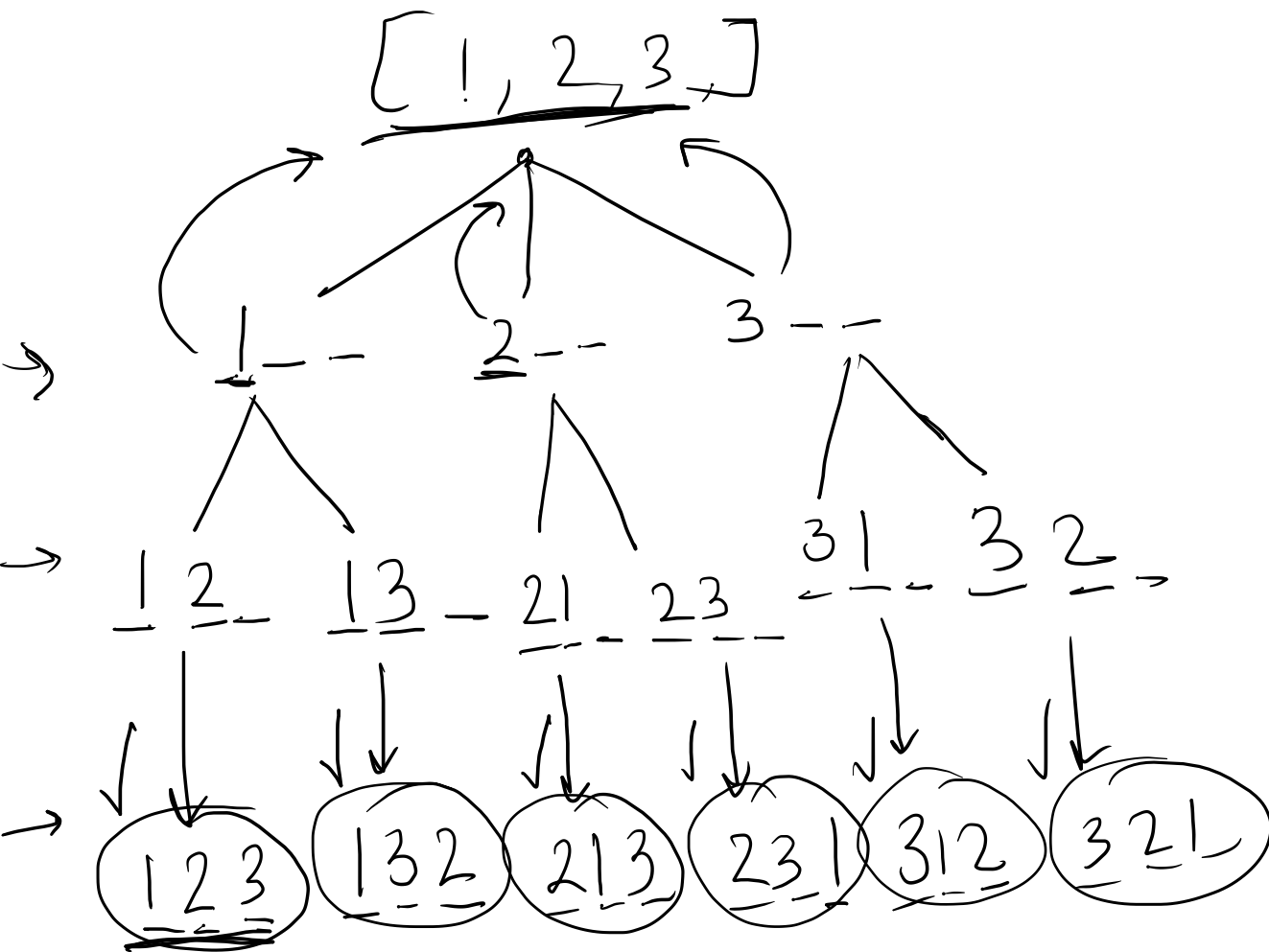
Permutations

[1, 2, 3]

n
↘
n!

$$\underline{3} \times \underline{2} \times \underline{1} = 6$$

$$3!$$



$n=3$ Combinations

$[1, 2, 3]$ $k=2$

$[1, 2]$ $[1, 3]$ $[2, 3]$

$n=4$

$k=2$

$[1, 2, 3, 4]$

