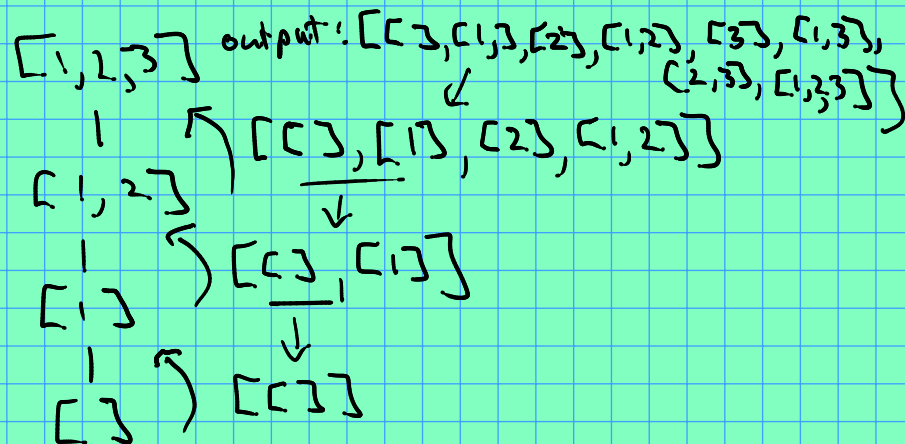


Recall power set also:

Trace on input $[1, 2, 3]$.



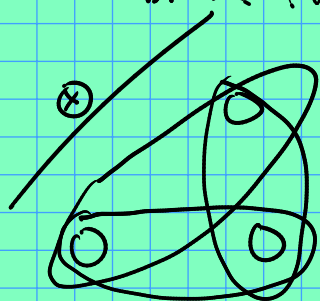
Another combinatorial problem: compute all k -subsets.

Ex: if $V = [1, 2, 3, 4]$ & $k = 2$

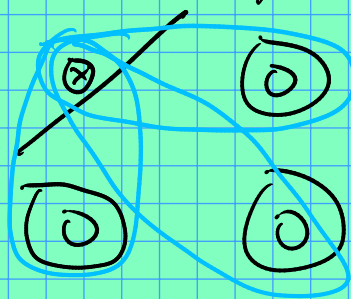
output: $[1, 2], [1, 3], [1, 4], [2, 3], [2, 4], [3, 4]$

size: $\binom{4}{2}$ of course.

How to break this down recursively?



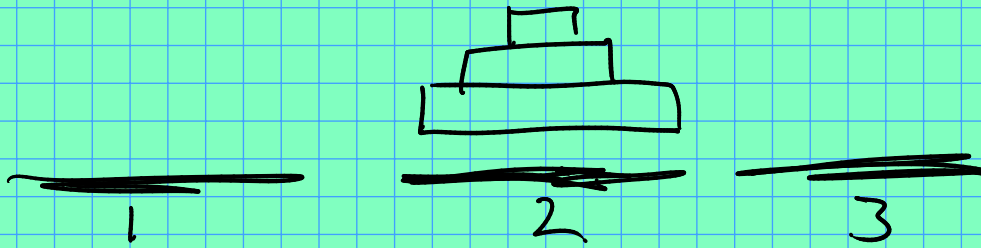
k -subsets of $V \setminus \{x\}$



$(k-1)$ -subsets of $V \setminus \{x\}$

\cup (with x added.)

Towers of Hanoi:



1 → 2
1 → 3
2 → 3
1 → 2
3 → 1
3 → 2
1 → 2