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5-) $T(n) = 2T(n/2) + 1$

4-) $T_1 = (n-1)T(n-1) + 1 \Rightarrow O(n!)$

$T_2 = n \cdot m \Rightarrow O(nm)$

$O(n!) + O(nm) = O(n! \cdot m)$

1-) $T(n) = 2T(n-1) + O(1)$

$\Theta(2^n)$

2-) Generating permutations takes $O(n!)$ and calculating cost takes $O(n!)$ time

$O(n!) + O(n!) = O(n!)$ it should generate permutations for every cases $\Theta(n!)$, $O(n!)$, $\Omega(n!)$

3-) Generate permutations function takes $O(n!)$. and cost functions takes $O(n!)$ total time complexity

$O(n!)$ for best and average $\Omega(n!)$, $\Theta(n!)$