

Tut 1

1-Consider the recurrence equation, $T(n) = 2T(n - 1) + 1$, for $n > 1$, where $T(n) = 1$ for $n = 1$.

Prove that $T(n)$ is $O(2^n)$.

2-Solve the recurrence equation, $T(n) = T(n - 2) + n$, where $T(n) = 0$ for $n = 1$.

3-Solve the recurrence equation, $T(n) = 3T(n - 2)$, where $T(n) = 1$ for $n = 1$.