
Tutorial 2

1 Solving recurrences

Solve the following recurrences to obtain a closed-form big- Θ expression for $T(n)$. In each recurrence, you can assume that $T(1) = 1$. And you may assume that n is a power of 2 if that assumption is helpful.

(a) $T(n) = T(n - 1) + 1$.

(b) $T(n) = 2T(n - 1) + 1$.

(c) $T(n) = T(\frac{n}{2}) + 1$.