

## EXERCICIOS

①  $T(n) = aT(n/b) + cn$   $a, b, c > 1$  (t<sup>es</sup>  $T(1) = 1$ )

$a < b \Rightarrow T(n) \text{ es } O(n)$

$a = b \Rightarrow T(n) \text{ es } O(n \log_2 n)$

$a > b \Rightarrow T(n) \text{ es } O(n^{\log_2 a})$

②  $T(n) = KT(n-1) + S$   $n > 1, K, S > 1$   $T(1) = 1$

$T(n) \text{ es } O(K^n)$

③  $T(n) = KT(n-1) + f(n)$   $n > 1, K > 1$   $T(1) = 1$   
 $f(n) \geq 0 \quad \forall n \geq 0$

④  $T(n) = T(n/2) * [T(n/4)]^2$   $n \geq 4$   $T(1) = 2$   $T(2) = 4$

⑤  $\frac{T(n)}{2^n} = \frac{2^{n/2} T(n/2)}{T(n/4)}$   $n \geq 2$   $T(0) = 1$   $T(1) = 4$   
 $T(2) = 16$

⑥  $T(n) = 2T(n/2) + n^4$   $n \geq 2$   $T(1) = 1$

⑦  $T(n) = 2T(n/2) + \log_2 n$   $n \geq 2$   $T(1) = 1$