O - NOTATION

$$T(n) = f(n)$$

$$O(g(n)) = \{ f(n) \mid \exists \; c > 0 \;, \; n_0 \in \mathbb{N} : 0 \le f(n) \le c\,g(n) \; \forall \; n > n_0 \}$$

Ω - NOTATION

$$\Omega(g(n)) = \{ f(n) \mid \exists \; c > 0, \; n_0 \in \mathbb{N} : 0 \le c\,g(n) \le f(n) \; \forall n > n_0 \}$$

Θ - NOTATION

$$\Theta(g(n)) = \{ f(n) \mid \exists \; c_1, c_2 > 0 \;, \; n_0 \in \mathbb{N} : 0 \le c_1 g(n) \le f(n) \le c_2 g(n) \; \forall n > n_0 \}$$

TEOREMA

$$f(n) = \Theta(g(n)) \iff \begin{cases} f(n) = O(g(n)) \\ f(n) = \Omega(g(n)) \end{cases}$$