0 - notation:

$$f(n)$$
 is $O(g(n))$

f(n) is O(g(n)) if $c.f(n) \leq g(n)$, for large $n \Rightarrow g$ is an upper bund of f, $n \geq n_o$

$$f(n) = n^2 + 3n + 1$$
 is $O(n^2)$