

Ex.3  $f(n) \in o(g(n)) \Leftrightarrow \exists N, k > 0 \text{ s.t. } \forall n > N: 0 \leq f(n) < k g(n)$

WTP:  $f(n) \in o(g(n))$

$$g(n) = n^2$$

$$f(n) = 3n^2$$

$$3n^2 < 4n^2 \quad \leftarrow \text{Let } k=2$$

For N=1 and k=2, this holds.