



Set definition of O-notation

$O(g(n)) = \{ f(n) : \text{there exist constants } c > 0, n_0 > 0 \text{ such that } 0 \leq f(n) \leq cg(n) \text{ for all } n \geq n_0 \}$

EXAMPLE: $2n^2 \in O(n^3)$

(*Logicians:* $\lambda n. 2n^2 \in O(\lambda n. n^3)$, but it's convenient to be sloppy, as long as we understand what's *really* going on.)