

Advent of Mathematical Symbols

Big O: $f(x) = \mathcal{O}(g(x)) \quad (x \rightarrow a)$

means: $|f(x)| \leq M \cdot |g(x)|$

$\left(\limsup_{x \rightarrow a} \left| \frac{f(x)}{g(x)} \right| < \infty \right)$

Example: $x^2 + x + 2 = \mathcal{O}(x^2) \quad (x \rightarrow \infty)$

$x^2 + x + 2 = \mathcal{O}(x^3) \quad (x \rightarrow \infty)$