16.2 Taylor polynomial [2D2]

Definition 16.34 (Landau Symbols)**.** [1FB]

In the following for simplicity we consider only the case in which $\lim_{x\to a} g(x) = 0$; moreover in Taylor's expansion we always have that $g(x) = (x-a)^n$ with $n \geq 1$ integer. [98]

Remark 16.35. [1FC]

Let's see two examples. Let $a = 0$ for simplicity.

Example 16.36. [1FD]

Example 16.37. [1FF]

Exercises

E16.38 [1FG]

E16.39 [1FJ]

E16.40 [1FM]

E16.41 [1FP]

E16.42 [1FR]

E16.43 [1FT]

QuasiEsercizio 49. [1FW]

See also exercise [1BR].

[98] Some authors also use the $o(1)$ notation to indicate an infinitesimal quantity for $x \to a$, but this can generate confusion .