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Derivative of holomorphic functions

Definition. Derivative of holomorphic functions

The complex derivative

$$\begin{aligned} \frac{\partial}{\partial z} : \mathcal{C}^{\mathcal{H}}(U) &\to \mathcal{C}^{\mathcal{H}}(U) \\ f &\mapsto \frac{\partial f}{\partial z} \end{aligned}$$

is a $\mathcal{C}^{\mathcal{H}}$-module derivation and a $\mathbb{C}$-linear map.

- its a morphism of sheaves!
  - locally invertible!
- e^{az} is the unique eigenvector with eigenvalue a

Current note has 0 direct children and 0 total descendants.

- stamp stamp
  - Rf subobjects of and functions on $\mathbb{R}^n, T^n, S^n, \mathbb{C}^n$
    - 1Hol Holomorphic functions on spaces over $\mathbb{C}$ of dimension 1
      - Hol Equivalent descriptions of holomorphic functions
        - d Derivative of holomorphic functions

And it has 4 siblings.

- stamp stamp
  - Rf subobjects of and functions on $\mathbb{R}^n, T^n, S^n, \mathbb{C}^n$
    - 1Hol Holomorphic functions on spaces over $\mathbb{C}$ of dimension 1

- Hol Equivalent descriptions of holomorphic functions
  - Cauchy Cauchy integral formula for holomorphic functions
  - d Derivative of holomorphic functions
  - integral Integral of holomorphic differential forms
  - power series Convergent power series