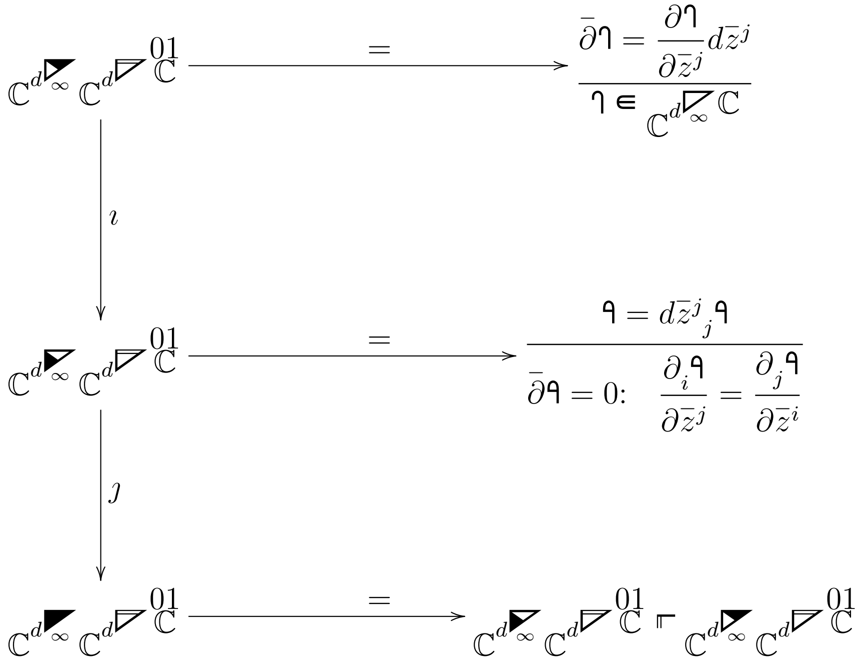

$$1 \leqslant k \leqslant +\infty$$

$$\begin{cases} {}_1 f \cdots {}_d f \in \mathbb{C}^d \nabla_{k+0}^{0} \mathbb{C} \\ \frac{\partial\, {}_i f}{\partial \bar z^j} = \frac{\partial\, {}_j f}{\partial \bar z^i}: \quad \bar\partial \underbrace{d\bar z^j\, {}_j f}_{} = 0 \end{cases} \Rightarrow \begin{cases} \bigvee_{\text{eind}} f \in \mathbb{C}^d \nabla_{k+0}^{0} \mathbb{C} \\ \frac{\partial f}{\partial \bar z^j} = {}_j f: \quad \bar\partial f = \frac{\partial f}{\partial \bar z^j} d\bar z^j \end{cases}$$

$$\text{Ex}: \quad {}^{z^1:z'} f = \int_{d\bar w^1 : dw^1}^{\mathbb{C}} \frac{{}^{w^1:z'}_{\ \ 1} f}{w^1 - z^1} = \int_{d\bar\zeta\, d\zeta}^{\mathbb{C}} \frac{{}^{z^1+\zeta:z'}_{\ \ \ 1} f}{\zeta} \Rightarrow \begin{cases} f \in \mathbb{C}^d \nabla_{k+0} \mathbb{C} \\ {}^{z^1:z'} \frac{\partial f}{\partial \bar z^1} = {}^{z^1:z'}_{\ \ 1} f \end{cases}$$

$$\bigwedge_{2 \leqslant j} {}^{z^1:z'} \frac{\partial f}{\partial \bar\zeta^j} = \int_{d\bar\zeta\, d\zeta}^{\mathbb{C}} \frac{1}{\zeta}\, {}^{z^1+\zeta:z'} \frac{\partial\, {}_1 f}{\partial \bar\zeta^j} = \int_{d\bar\zeta\, d\zeta}^{\mathbb{C}} \frac{1}{\zeta}\, {}^{z^1+\zeta:z'} \frac{\partial\, {}_j f}{\partial \bar\zeta^1} = \int_{d\bar w^1\, dw^1}^{\mathbb{C}} \frac{1}{w^1 - z^1}\, {}^{w^1:z'} \frac{\partial\, {}_j f}{\partial \bar w^1} \underset{\text{Cau}}{\overset{\text{allg}}{=}} {}^{z^1:z'}_{\ \ j} f$$

$$\text{cpt } K := \bigcup_{1 \leqslant j \leqslant d} \text{Trg }\, {}_j f \subset \mathbb{C}^d \Rightarrow \frac{\partial f}{\partial \bar z^j} = {}_j f \underset{\mathbb{C}^d \llcorner K}{=} 0 \Rightarrow f \text{ hol on } \mathbb{C}^d \llcorner K$$

$$\mathbb{C}^d \llcorner K \Subset U = \frac{z^1:z'}{\ulcorner z' \urcorner > \curlyvee_w^K \ulcorner w' \urcorner} \text{ unbes } \Rightarrow \overbrace{\mathbb{C}^d \llcorner K}^{\infty} \cap U \neq \varnothing$$

$$z^1 : z' \in U \Rightarrow \bigwedge_{w^1 \in \mathbb{C}} w^1 : z' \notin K \Rightarrow {}^{w^1 z'}_{\ \ 1} f = 0 \underset{\text{Def}}{\Rightarrow} {}^{z^1 z'} f = 0$$

$$\Rightarrow f \underset{U}{=} 0 \underset{\text{Ident}}{\Rightarrow} f \underset{\overbrace{\mathbb{C}^d \llcorner K}^{\infty}}{=} 0 \Rightarrow \text{ Trg } f \subset \mathbb{C}^d \llcorner \overbrace{\mathbb{C}^d \llcorner K}^{\infty} \text{ bes } \Rightarrow f \in \mathbb{C}^d \nabla_{k+0}^{0} \mathbb{C}$$

$$\text{Eind}: \quad \begin{cases} f \in \mathbb{C}^d \nabla_{k+0}^{0} \mathbb{C} \\ \frac{\partial f}{\partial \bar z^j} = 0 \end{cases} \Rightarrow f \in \mathbb{C}^d \,{}^{0}_{\omega}\!\triangle\, \mathbb{C} = \mathbb{C} \Rightarrow f = \text{ cst } = {}^{\infty} f = 0$$