$$\mathbb{C}^{\times} = \mathbb{C}\llcorner 0 = \frac{x+iy}{x^2+y^2>0}$$

$$(x{:}y)^{-1} = \frac{(x{:}-y)}{x^2+y^2} = \left(\frac{x}{x^2+y^2}{:}\frac{-y}{x^2+y^2}\right)$$

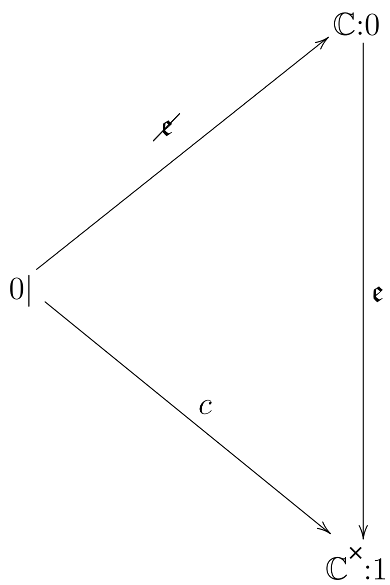
$$\left(\begin{array}{c|c} x & y \\ \hline -y & x \end{array}\right)^{-1} = \frac{1}{x^2+y^2}\begin{array}{c|c} x & -y \\ \hline y & x \end{array}$$

$$\mathbb{C} \supset \mathbb{C}^{\times} \xrightarrow[\text{stet}]{\text{inv}} \mathbb{C}^{\times}$$

$$w \neq 0 \mapsto \overline{z-w} \leqslant \frac{\overline{w}}{2} \Longrightarrow \overline{z} \geqslant \frac{\overline{w}}{2} \curvearrowright \overline{\frac{1}{z}-\frac{1}{w}} = \frac{\overline{w-z}}{\overline{z}\,\overline{w}} \leqslant 2\frac{\overline{w-z}}{\overline{w^2}} \text{ stet}$$

$$\mathbb{C} \supset \mathbb{C}^{\times} \xrightarrow[\text{diff}]{\text{inv}} \mathbb{C}^{\times}$$

$$\partial_z \text{ inv } = \frac{-1}{z^2}$$



$$c\left(t\right)=\int_{ds}^{0|t}\frac{\cancel{\mathfrak{e}}}{\cancel{\mathfrak{e}}}=\int_{ds}^{0|t}\frac{{}^{s}\cancel{\mathfrak{e}}}{{}_{s}\cancel{\mathfrak{e}}}\Longrightarrow c\left(0\right)=0$$

$$c\ \text{diff}$$

$${}^{t}\underline{c}\ =\frac{{}^{t}\cancel{\mathfrak{e}}}{{}^{t}\cancel{\mathfrak{e}}}\ \text{stet}$$

$$\Longrightarrow \exp\left(c\right)/\,{}^{t}\underline{\cancel{\mathfrak{e}}}\ =\frac{\exp\left(\underline{c}\right)\left(t\right){}^{t}\cancel{\mathfrak{e}}-\exp\left(c\left(t\right){}^{t}\underline{\cancel{\mathfrak{e}}}\right)}{{}^{t}\cancel{\mathfrak{e}}^{2}}=\frac{\exp\left(c\left(t\right)\right)\underline{c}\left(t\right){}^{t}\cancel{\mathfrak{e}}-\exp\left(c\left(t\right){}^{t}\underline{\cancel{\mathfrak{e}}}\right)}{{}^{t}\cancel{\mathfrak{e}}^{2}}=0$$

$$\Longrightarrow\frac{\exp\left(c\right)}{\cancel{\mathfrak{e}}}=\ \text{cst}\ =\frac{1}{{}^{0}\cancel{\mathfrak{e}}}$$

$${}^{0}\cancel{\mathfrak{e}}\ =\ {}^{a}\mathfrak{e}\Longrightarrow{}^{c+a}\mathfrak{e}\ =\ {}^{c}\mathfrak{e}\ {}^{a}\mathfrak{e}\ =\frac{\cancel{\mathfrak{e}}}{{}^{0}\cancel{\mathfrak{e}}}\,{}^{0}\cancel{\mathfrak{e}}$$