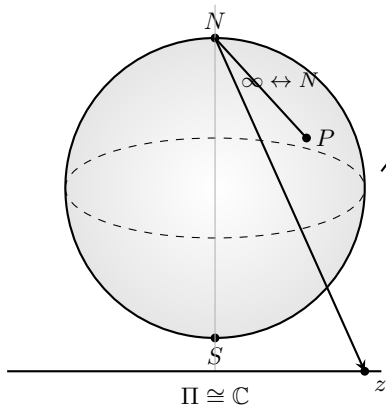$\sigma : S^2 \setminus \{N\} \to \mathbb{C}$
$P \mapsto z$

$\mathbb{C}$ (stereographic image of $S^2 \setminus \{N\}$)

add ∞

$\Im z$

$\Re z$

N

$\infty \leftrightarrow N$

P

S

z

σ

z

$\Pi \cong \mathbb{C}$

$\mathbb{CP}^1 \cong \mathbb{C} \cup \{\infty\}$