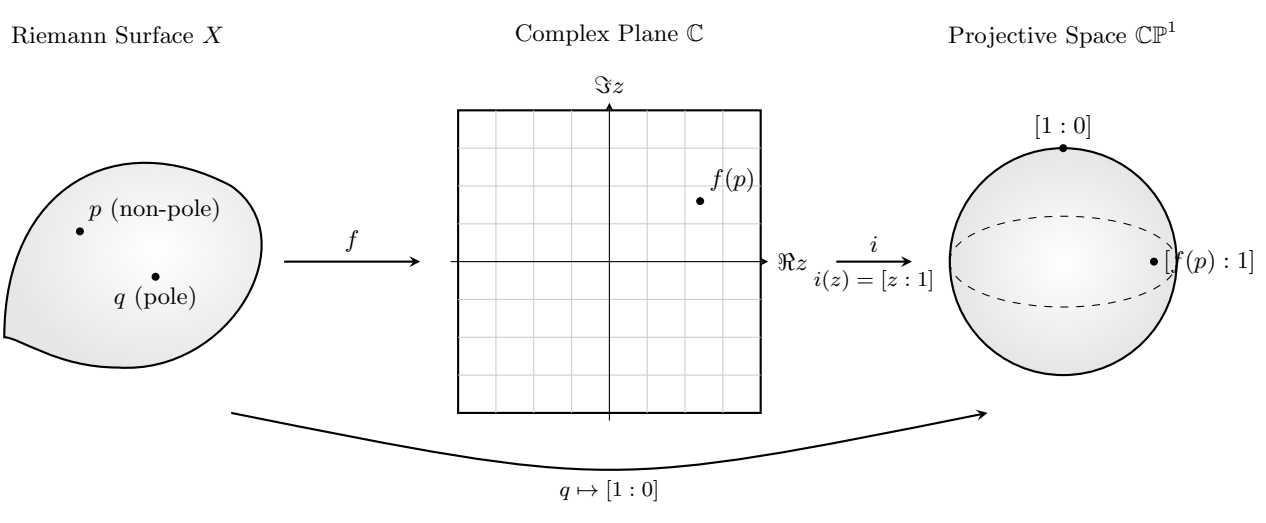
Riemann Surface X
Complex Plane $\mathbb{C}$
Projective Space $\mathbb{CP}^1$
p (non-pole)
q (pole)
f
$\Im z$
$f(p)$
$\Re z$
i
$i(z) = [z : 1]$
$[1 : 0]$
$[f(p) : 1]$
$q \mapsto [1 : 0]$