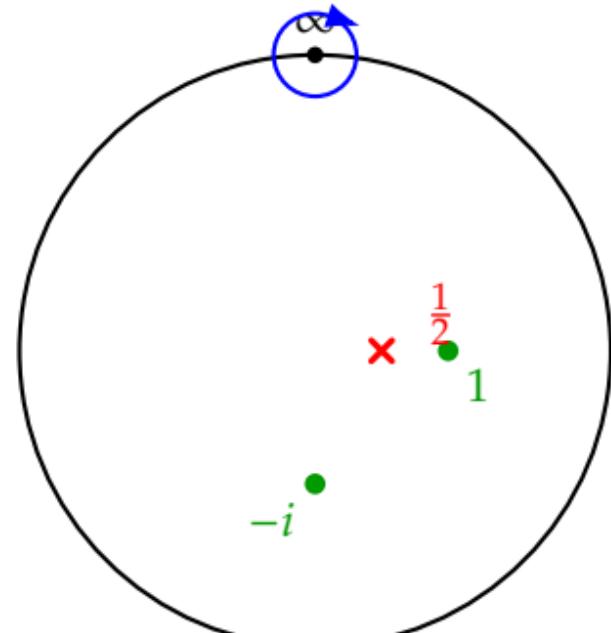
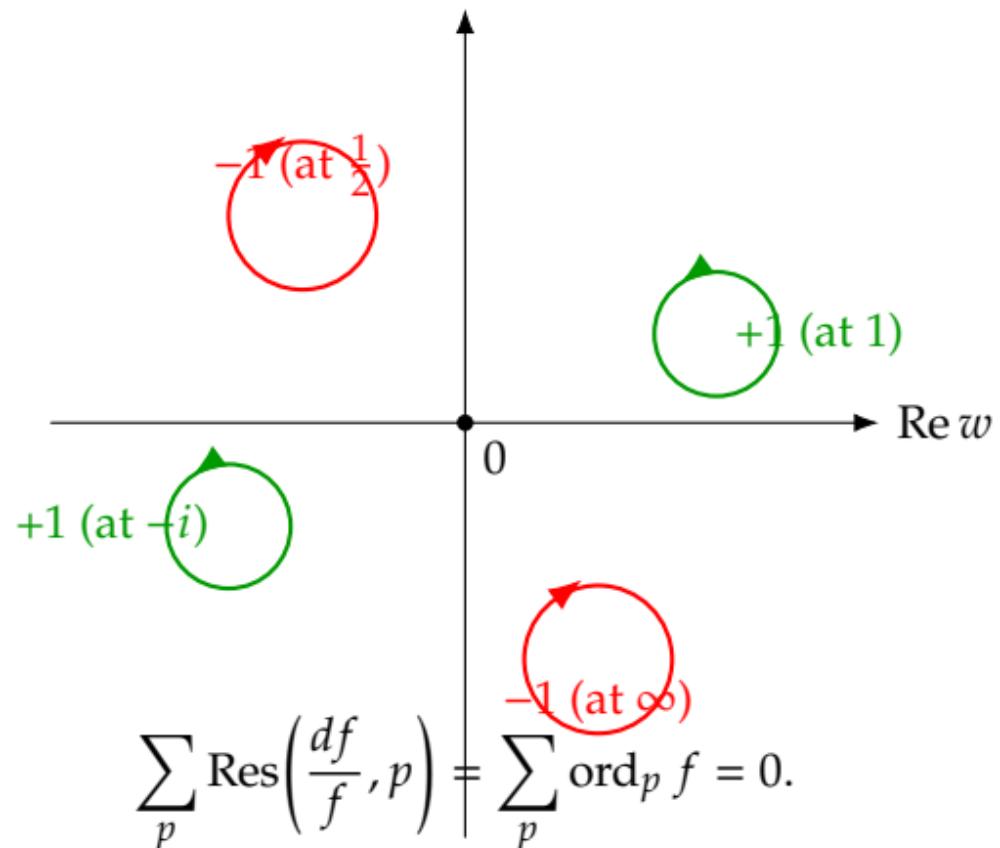


Riemann sphere $\widehat{\mathbb{C}}$ (domain)



$$f(z) = \frac{(z-1)(z+i)}{z-\frac{1}{2}}, \quad \sum \text{ord}_p f = 1 + 1 - 1 - 1 = 0.$$

w -plane (image near punctures)



$$\sum_p \text{Res}\left(\frac{df}{f}, p\right) = \sum_p \text{ord}_p f = 0.$$