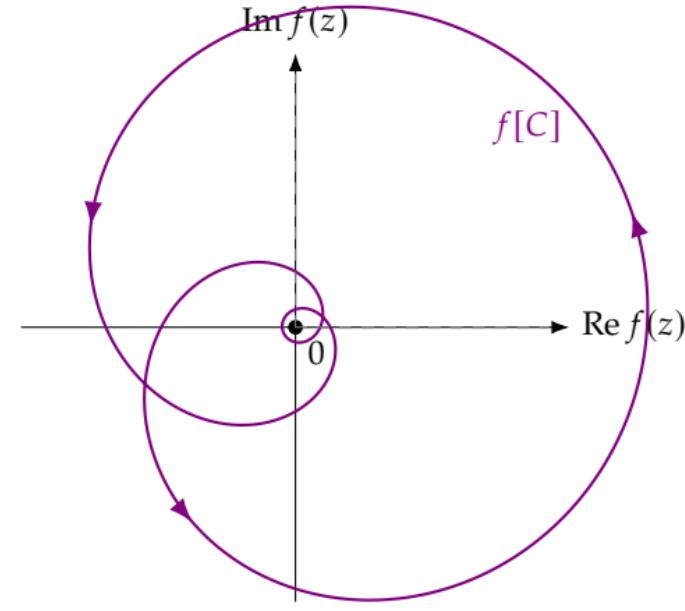


$$f(z) = (z - p)^3$$

$$d(\log f) = \frac{f'(z)}{f(z)} dz = \frac{df}{f}$$

$$\Rightarrow \frac{df}{f} = \frac{3(z - p)^2}{(z - p)^3} dz = \frac{3}{z - p} dz$$

z -plane



$f(z)$ -plane

[Degree]

$$\oint_C d(\log f) = \oint_C \frac{df}{f} = 3 \oint_C \frac{1}{z - p} dz$$

$$\xrightarrow[z=p+e^{it}]{t \in [0, 2\pi]} 3 \oint_{[0, 2\pi]} \left(e^{-it}\right) \left(ie^{it} dt\right) = 3i \oint_{[0, 2\pi]} 1 dt = 2\pi i \cdot 3$$