



[Degree]

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

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