

$$\int_0^{2\pi} \frac{e^{it} + a}{e^{it} - a} dt = \left. \begin{array}{l} e^{it} = z \\ iz dt = dz \end{array} \right| = \int_{\gamma} \frac{z+a}{(z-a)iz} dz = *$$

$$\text{Res}(f, a) = \lim_{z \rightarrow a} \frac{z+a}{z} = 2$$

$$\text{Res}(f, 0) = \lim_{z \rightarrow 0} \frac{z+a}{z-a} = -1$$

$$* = \frac{1}{i} \cdot 2\pi i \left[\text{Res}(f, a) \cdot \text{Ind}(a) + \text{Res}(f, 0) \cdot \text{Ind}(0) \right]$$

$$|a| > 1 \quad -2\pi$$

$$|a| < 1 \quad 2\pi$$