

$$\text{Log}(1+i) = \left\{ \text{Log } z = \ln|z| + i \arg z + i2k\pi \right\}$$

$$|1+i| = \sqrt{3+1} = \sqrt{4} = 2 \quad \begin{array}{l} \cos k = \frac{1}{2} \\ \sin k = \frac{1}{2} \end{array} \Rightarrow k = \frac{\pi}{6}$$

$$\text{Log}(1+i) = \ln 2 + i\frac{\pi}{6} + i2k\pi$$