

$$\text{Log}(1+i) = \left\{ \text{Log } z = \ln|z| + i \arg z + i 2k\pi \right\}$$

$$z = (1+i) \quad |z| = \sqrt{1+1} = \sqrt{2}$$

$$\begin{array}{l} \cos \angle = \frac{1}{\sqrt{2}} \\ \sin \angle = \frac{1}{\sqrt{2}} \end{array} \Bigg| \rightarrow \angle = \frac{\pi}{4}$$

$$\text{Log}(1+i) = \ln \sqrt{2} + i \frac{\pi}{4} + 2k\pi$$

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