

$$\mathbb{C}:0 \xrightarrow{\text{hol}} \mathbb{C}:0 \Rightarrow * \begin{cases} \overset{0}{z} \leq 1 & z = 0 \\ \overset{z}{z} \leq \overset{z}{z} & z \neq 0 \end{cases}$$

$$** \begin{cases} \overset{0}{z} = 1 \\ \bigvee_{e \neq 0} \overset{e}{z} = \overset{e}{z} \end{cases} \Rightarrow z = \overset{0}{z} \in \bar{\mathbb{C}}$$

$$z_1 = \begin{cases} \overset{0}{z} & z = 0 \\ \frac{\overset{z}{z}}{z} = \frac{z - \overset{0}{z}}{z - 0} & z \neq 0 \end{cases} \Rightarrow 1 \in \mathbb{C} \triangleleft_{\varepsilon} \mathbb{C}$$

$$\bigwedge_{\zeta} \overset{\zeta}{z}_1 = \frac{\overset{\zeta}{z}}{r} < \frac{1}{r} \Rightarrow \bigwedge_{\overset{z}{z} < r < 1} \overset{z}{z}_1 \stackrel{\text{bou}}{\leq} \overset{\zeta}{z}_1 \leq \frac{1}{r} \underset{r \rightarrow 1}{\rightarrow} 1 \Rightarrow \overset{z}{z}_1 \leq 1 \Rightarrow *$$

$$** \Rightarrow \bigvee_o \overset{o}{z}_1 = 1 = \overset{\zeta}{z}_1 \stackrel{\text{int}}{\underset{\text{Max}}{\rightarrow}} 1 = \vartheta \in \bar{\mathbb{C}}$$

$$\underset{\subset}{\mathbb{C}} \xrightarrow{\text{hol}} \underset{\subset}{\mathbb{C}} \Rightarrow \left\{ \begin{array}{l} \frac{\overline{w}^2}{1 - \overline{w}^2} \leq \frac{1}{1 - \overline{w}^2} : \overline{w} \leq \frac{1 - \overline{w}^2}{1 - \overline{w}^2} : \overline{0} \leq 1 - \overline{0}^2 \\ \frac{\overline{z} - \overline{w}}{1 - \overline{z} \overline{w}^*} \leq \frac{\overline{z} - \overline{w}}{1 - \overline{z} \overline{w}^*} : \overline{z} \leq \frac{1 - \overline{z} \overline{w}^*}{1 - \overline{z} \overline{w}^*} \end{array} \right.$$

$$z\gamma^w = \frac{z+w}{1+z\bar{w}} \Rightarrow \underset{\subset}{\mathbb{C}}:0 \xrightarrow{\text{hol}} \underset{\subset}{\mathbb{C}}:0 \xrightarrow{\gamma^w \times \bar{\gamma}^w}$$

$$\underbrace{1 - \overline{w}^2}_{=0} \overline{w} = \underbrace{0}_{=0} \gamma^w \overline{w} = \underbrace{0}_{=0} \gamma^w \times \bar{\gamma}^w \overline{w} = \underbrace{0}_{=0} \gamma^w \times \bar{\gamma}^w \times \gamma^w \overline{w} = \underbrace{0}_{=0} \gamma^w \times \bar{\gamma}^w \overline{w} \times \gamma^w = \underbrace{0}_{=0} \gamma^w \times \bar{\gamma}^w \overline{w} \times \gamma^w = \underbrace{0}_{=0} \gamma^w \times \bar{\gamma}^w \overline{w} \times \gamma^w \times \underbrace{1 - \overline{w}^2}_{=0}$$

$$\Rightarrow \underbrace{1 - \overline{w}^2}_{=0} \overline{w} = \overbrace{\gamma^w \times \bar{\gamma}^w \overline{w}}^{\leq 1} \times \underbrace{1 - \overline{w}^2}_{=0} \leq 1 - \overline{w}^2$$

$$\frac{\overline{z} - \overline{w}}{1 - \overline{z} \overline{w}^*} = \overline{z} \overline{\gamma}^w = \overbrace{\overline{z} \times \bar{\gamma}^w} = \overbrace{\overline{z} \times \gamma^w \times \bar{\gamma}^w} = \overbrace{\overline{z} \times \gamma^w} \times \overbrace{\bar{\gamma}^w}$$

$$\Rightarrow \frac{\overline{z} - \overline{w}}{1 - \overline{z} \overline{w}^*} = \overbrace{\overline{z} \times \bar{\gamma}^w} \leq \overline{z} \times \overbrace{\bar{\gamma}^w} = \frac{\overline{z} - \overline{w}}{1 - \overline{z} \overline{w}^*}$$