

1.1.3 $S \neq \emptyset \quad S \subseteq \mathbb{R}$ BOUNDED ABOVE

$$\Rightarrow \sup S \equiv \beta \quad \left| \begin{array}{l} x \leq \beta \quad \forall x \in S \\ \exists, \text{UNIQUE} \quad \downarrow \\ \text{IF } \varepsilon > 0 \rightarrow \exists x_0 \in S \mid x_0 > \beta - \varepsilon \end{array} \right.$$

1.1.8 $S \neq \emptyset \quad S \subseteq \mathbb{R}$ BOUNDED BELOW

$$\Rightarrow \inf S \equiv \alpha \quad \left| \begin{array}{l} x \geq \alpha \quad \forall x \in S \\ \exists, \text{UNIQUE} \quad \downarrow \\ \text{IF } \varepsilon > 0 \rightarrow \exists x_0 \in S \mid x_0 < \alpha + \varepsilon \end{array} \right.$$