$$\overset{\omega}{\mho}|\mathtt{1} = \frac{\mathtt{l} \in \mho|\mathtt{1}}{\overline{\mathtt{l}\ \mathtt{1}_{\leqslant}}\ \text{cpt}} \overset{\text{abg *-ideal}}{\sqsubset} \mho|\mathtt{1}$$

$$\mathtt{l} \in \overset{\omega}{\mho}|\mathtt{1} \Rightarrow \overline{\mathtt{l}\ \mathtt{1}_{\leqslant}}\ \text{cpt} \ \Rightarrow \mathtt{l}\ \mathtt{1}_{\leqslant}\ \text{bes} \ \Rightarrow \mathtt{l}\ \ \text{stet}$$

$$\mathtt{l} \in \overline{\overset{\omega}{\mho}|\mathtt{1}}$$

$$\mathtt{l}\ \mathtt{1}_{\leqslant}\ \text{precpt}$$

$$\bigwedge_{\varepsilon > 0} \bigvee_{\mathtt{z}}^{\overset{\omega}{\mho}|\mathtt{1}} \left\| \mathtt{l} - \mathtt{z} \right\| \leqslant \varepsilon$$

$$\overline{\mathtt{z}\mathtt{1}_{\leqslant}}\ \text{cpt} \ \Rightarrow \mathtt{z}\ \ \mathtt{1}_{\leqslant}\ \text{pre-cpt} \ \Rightarrow \bigvee_{\text{fin}\ \mathtt{y} \subset \mathtt{1}_{\leqslant}} \mathtt{z}\ \ \mathtt{1}_{\leqslant} \subset \bigcup_{\mathtt{y} \in \mathtt{y}} \mathtt{1}_{\leqslant\varepsilon}^{\mathtt{z}\mathtt{y}}$$

$$\mathtt{l}\ \ \mathtt{1}_{\leqslant} \subset \bigcup_{\mathtt{y} \in \mathtt{y}} \mathtt{1}_{\leqslant 3\varepsilon}^{\mathtt{z}\mathtt{y}}$$

$$\mathtt{7} \in \mathtt{1}_{\leqslant} \Rightarrow \mathtt{z}\ \mathtt{7} \in \mathtt{z}\ \ \mathtt{1}_{\leqslant} \Rightarrow \bigvee_{\mathtt{y} \in \mathtt{y}} \left\| \mathtt{z}\mathtt{7} - \mathtt{z}\mathtt{y} \right\| \leqslant \varepsilon$$

$$\Rightarrow \left\| \mathtt{l}\ \mathtt{7} - \mathtt{l}\ \mathtt{y} \right\| \leqslant \left\| \mathtt{l}\ \mathtt{7} - \mathtt{z}\mathtt{7} \right\| + \overbrace{\left\| \mathtt{z}\mathtt{7} - \mathtt{z}\mathtt{y} \right\|}^{\leqslant \varepsilon} + \left\| \mathtt{z}\mathtt{y} - \mathtt{l}\ \mathtt{y} \right\| \leqslant \overbrace{\left\| \mathtt{l} - \mathtt{z} \right\|}^{\leqslant \varepsilon} \overbrace{\left\| \mathtt{7} \right\|}^{\leqslant 1} + \varepsilon + \overbrace{\left\| \mathtt{z} - \mathtt{l} \right\|}^{\leqslant \varepsilon} \overbrace{\left\| \mathtt{y} \right\|}^{\leqslant 1} \leqslant 3\varepsilon$$

$$\Rightarrow \ \text{voll metr}\ \mathtt{1} \supset \mathtt{l}\ \ \mathtt{1}_{\leqslant}\ \text{precpt}$$

$$\overset{\text{Thm}}{\Rightarrow} \ \overline{\mathtt{l}\ \mathtt{1}_{\leqslant}}\ \text{cpt} \ \Rightarrow \mathtt{l} \in \overset{\omega}{\mho}|\mathtt{1}$$

$$\overset{0}{\mho}|\mathtt{1} \ \underset{\text{hull}}{\sqsubset} \ \overset{\omega}{\mho}|\mathtt{1} = \overline{\overset{0}{\mho}|\mathtt{1}}$$

$$\mathtt{l} \in \overset{\omega}{\mho}|\mathtt{1} \Rightarrow \overline{\mathtt{l}\ \mathtt{1}_{\leqslant}}\ \text{cpt met} \ \Rightarrow \overline{\mathtt{l}\ \mathtt{1}_{\leqslant}}\ \text{met abz} \ \Rightarrow \mathtt{1} \supset \overline{\mathtt{l}\ \mathtt{1}}\ \text{met abz} \ \Rightarrow \bigvee_{\text{abz ONB}} \mathtt{l}^{i} \in \overline{\mathtt{l}\ \mathtt{1}}$$

$$\bigwedge_{N} P_N = \sum_{i}^{N} \mathtt{l}^{i}\ \overset{*}{\mathtt{l}}{}^{i} \in \overset{0}{\mho}|\mathtt{1} \ni P_N\ \mathtt{l} = \sum_{i}^{N} \mathtt{l}^{i}\ \overset{*}{\mathtt{l}}{}^{i}\ \mathtt{l} = \sum_{i}^{N} \mathtt{l}^{i}\ \left(\overset{*}{\overset{*}{\mathtt{l}}\mathtt{l}}{}^{i} \right)$$

$$\bigwedge_{\text{ꓶ}\in\text{ꓶ}} \text{ꓶ ꓶ} \ni \text{ꓶ ꓶ} = \sum_i \text{ꓶ}^i \overbrace{\text{ꓶ}^i \text{ꓫ} \underbrace{\text{ꓶ ꓶ}}} \underset{N \rightsquigarrow \infty}{\approx} \sum_i^N \text{ꓶ}^i \overbrace{\text{ꓶ}^i \text{ꓫ} \underbrace{\text{ꓶ ꓶ}}} = \overbrace{P_N}\,\text{ꓶ ꓶ}$$

$$\text{ꓶ} \in \overline{\overset{0}{\oplus} | \text{ꓶ}}$$

$$\bigwedge_{\varepsilon > 0} \bigwedge_{\text{ꓶ}\in \overline{\text{ꓶ ꓶ}}_{\leqslant}} \bigvee_{\text{ꓶ}\in \text{ꓶ}_{\leqslant}} \left\| \text{ꓶ} - \text{ꓶ ꓶ} \right\| < \varepsilon \Rightarrow \overline{\text{ꓶ ꓶ}}_{\leqslant} \subset \bigcup_{\text{ꓶ}\in\text{ꓶ}_{\leqslant}} \text{ꓶ}^{\text{ꓶ ꓶ}}_{\leqslant\varepsilon} \text{ off deck}$$

$$\underset{\text{cpt}}{\Rightarrow} \bigvee_{\text{fin } \text{ꓤ} \subset \text{ꓶ}_{\leqslant}} \overline{\text{ꓶ ꓶ}}_{\leqslant} \subset \bigcup_{\text{ꓤ}\in\text{ꓤ}} \underbrace{\text{ꓶ ꓤ} + \varepsilon \text{ꓶ}_{\approx}}$$

$$\bigwedge_{\text{ꓤ}\in\text{ꓤ}} \bigvee_{N_{\text{ꓤ}}} \bigwedge_{N \supset N_{\text{ꓤ}}} \left\| \text{ꓶ ꓤ} - \overbrace{P_N}\,\text{ꓶ ꓤ} \right\| \leqslant \varepsilon$$

$$\left\| \text{ꓶ} - P_N \text{ꓶ} \right\| \leqslant \varepsilon$$

$$\bigwedge_{\text{ꓶ}\in\text{ꓶ}_{\leqslant}} \bigvee_{\text{ꓤ}\in\text{ꓤ}} \left\| \text{ꓶ ꓶ} - \text{ꓶ ꓤ} \right\| \leqslant \varepsilon \Rightarrow \bigwedge N \supset \bigcup_{\text{ꓤ}\in\text{ꓤ}} N_{\text{ꓤ}} \left\| P_N \underbrace{\text{ꓶ ꓶ} - \text{ꓶ ꓤ}} \right\| \leqslant \overbrace{\left\| P_N \right\|}^{\leqslant 1} \overbrace{\left\| \text{ꓶ ꓶ} - \text{ꓶ ꓤ} \right\|}^{\leqslant \varepsilon} \leqslant \varepsilon$$

$$\Rightarrow \left\| \text{ꓶ ꓶ} - \overbrace{P_N}\,\text{ꓶ ꓶ} \right\| \leqslant \overbrace{\left\| \text{ꓶ ꓶ} - \text{ꓶ ꓤ} \right\|}^{\leqslant \varepsilon} + \overbrace{\left\| \text{ꓶ ꓤ} - \overbrace{P_N}\,\text{ꓶ ꓤ} \right\|}^{\leqslant \varepsilon} + \overbrace{\left\| \overbrace{P_N}\,\text{ꓶ ꓤ} - \overbrace{P_N}\,\text{ꓶ ꓶ} \right\|}^{\leqslant \varepsilon} \leqslant 3\varepsilon \underset{\text{ꓶ bel}}{\Rightarrow} \left\| \text{ꓶ} - P_N \text{ꓶ} \right\| \leqslant \varepsilon$$

$$\underset{\varepsilon \text{ bel}}{\Rightarrow} \text{ꓶ} \in \overline{\overset{0}{\oplus} | \text{ꓶ}}$$