$$\mathbb{I}^{\infty}_{0}\mathbb{R} \sqsubset \mathbb{I}^{\infty}_{i}\mathbb{R}$$

$$\mathfrak{h} \xrightarrow[\text{stet}]{\mathfrak{q}} \mathbb{R} \Longrightarrow \begin{cases} \mathfrak{h} \xrightarrow[\text{bes}]{\mathfrak{q}} \mathbb{R} \\ \mathfrak{h} \xrightarrow[\text{int}]{\mathfrak{q}} \mathbb{R} \quad \bigvee\limits_{o}^{\mathfrak{h}} \colon \quad {}^{o}\mathfrak{q} = \dfrac{1}{|\mathfrak{h}|}\int^{\mathfrak{h}} \mathfrak{q} \end{cases}$$

$$\mathfrak{h} \xrightarrow[\text{u-stet}]{\mathfrak{q}} \mathbb{R} \underset{\text{Arch}}{\Rightarrow} \bigvee_{n}^{\mathbb{N}} \frac{1}{n} \leqslant \frac{1}{|\mathfrak{h}|}\left(\varepsilon/|\mathfrak{h}|\right)^{\mathfrak{h}}_{\mathfrak{q}}$$

$$\mathcal{I} = \text{ n-equidist part } \Longrightarrow \bigwedge_{I}^{\mathcal{I}} |I| = \frac{|\mathfrak{h}|}{n} \leqslant \left(\varepsilon/|\mathfrak{h}|\right)^{\mathfrak{h}}_{\mathfrak{q}} \Longrightarrow \bigwedge_{\dot{x}}^{I} \overline{x - \acute{x}} \leqslant \left(\varepsilon/|\mathfrak{h}|\right)^{\mathfrak{h}}_{\mathfrak{q}} \curvearrowright \overline{{}^{x}\mathfrak{q} - {}^{\acute{x}}\mathfrak{q}} \leqslant \frac{\varepsilon}{|\mathfrak{h}|}$$

$${}^{\mathcal{I}}\dot{\mathfrak{q}} - {}^{\mathcal{I}}_{\bullet}\mathfrak{q} = \sum_{I}^{\mathcal{I}} |I| \underbrace{{}^{I}\dot{\mathfrak{q}} - {}^{I}_{\bullet}\mathfrak{q}}_{\leqslant \varepsilon/|\mathfrak{h}|} \leqslant \frac{\varepsilon}{|\mathfrak{h}|} \underbrace{\sum_{I}^{\mathcal{I}} |I|}_{=|\mathfrak{h}|} = \varepsilon$$

$$\begin{cases} \bigvee\limits_{\underline{x}}^{\mathfrak{h}} & {}^{\underline{x}}\mathfrak{q} = {}^{\mathfrak{h}}_{\bullet}\mathfrak{q} \\ \bigvee\limits_{\bar{x}}^{\mathfrak{h}} & {}^{\bar{x}}\mathfrak{q} = {}^{\mathfrak{h}}\dot{\mathfrak{q}} \end{cases} \Longrightarrow {}^{\underline{x}}\mathfrak{q} = {}^{\mathfrak{h}}_{\bullet}\mathfrak{q} \leqslant \frac{1}{|\mathfrak{h}|}\int^{\mathfrak{h}} \mathfrak{q} \leqslant {}^{\mathfrak{h}}\dot{\mathfrak{q}} = {}^{\bar{x}}\mathfrak{q} \underset{\text{ZWS}}{\Rightarrow} \bigvee_{o}^{\mathfrak{h}} {}^{o}\mathfrak{q} = \frac{1}{|\mathfrak{h}|}\int^{\mathfrak{h}} \mathfrak{q}$$

$$\text{ה} \xrightarrow[\text{monoton}]{\text{ן}} \mathbb{R} \Longrightarrow \begin{cases} \text{ה} \xrightarrow[\text{bes}]{\text{ן}} \mathbb{R} \\ \text{ה} \xrightarrow[\text{int}]{\text{ן}} \mathbb{R} \end{cases}$$

$$\text{OE ן isoton} \underset{\text{Arch}}{\Longrightarrow} \bigwedge_{\varepsilon}^{>0} \bigvee_{n}^{\mathbb{N}} n \geqslant \frac{b-a}{\varepsilon} \underbrace{{}^{b}\text{ן} - {}^{a}\text{ן}}$$

$$\mathcal{I} = \text{ n-equidist part } \Longrightarrow \bigwedge_{m}^{n} I_m = \underbrace{a + \frac{m}{n}\overbrace{b-a}} \,|\, \underbrace{a + \frac{m+1}{n}\overbrace{b-a}}$$

$${}^{\mathcal{I}}\text{ן} - {}^{\mathcal{I}}\text{ן} = \sum_{m}^{n} \frac{b-a}{n} \underbrace{{}^{I_m}\text{ן} - {}^{I_m}\text{ן}} = \frac{b-a}{n} \sum_{m}^{n} \underbrace{{}^{a+(m+1)\overbrace{b-a}/n}\text{ן} - {}^{a+m\overbrace{b-a}/n}\text{ן}} \underset{\text{tele}}{=} \frac{b-a}{n} \underbrace{{}^{b}\text{ן} - {}^{a}\text{ן}} \leqslant \varepsilon$$