LIST OF SPECIAL SYMBOLS AND THEIR MEANINGS

\( \varepsilon, \delta \) \hspace{1cm} \text{very small positive number and } > 0.

\( \varepsilon \) \hspace{1cm} \text{Belongs to}

\( \subset \) \hspace{1cm} \text{inclusion sign}

\( \mathbb{R}^* \) \hspace{1cm} \text{the set of Real numbers}

\( <, \leq, >, \geq \) \hspace{1cm} \text{inequality signs}

\( \forall \) \hspace{1cm} \text{for all}

\( \text{Sup.} \) \hspace{1cm} \text{least upper bound}

\( \text{Inf.} \) \hspace{1cm} \text{greatest lower bound}

\( \infty \) \hspace{1cm} \text{infinities}

\( ||.|| \) \hspace{1cm} \text{norm}

\( \{x_n\} \) \hspace{1cm} \text{sequences}

\( \{x_{nn,n}\} \) \hspace{1cm} \text{sub sequences}

\( \cup \) \hspace{1cm} \text{union}

\( i, j \) \hspace{1cm} \text{positive integers}

\( \mathbb{N} \) \hspace{1cm} \text{the set of positive integers}

\( X \) \hspace{1cm} \text{non-empty set}

\( d, \rho, \sigma, D \) \hspace{1cm} \text{Metrics}

\( (X, d), (X, \rho), \) \hspace{1cm} \text{complete metric spaces}

\( (X, \sigma), (X, D) \)

\( \alpha (x, y) \) \hspace{1cm} \text{family of mappings in } (X, d) \)
mappings from $\mathbb{R}^n$ to $\mathbb{R}^n$ such that $\phi^n(t) \to 0$, as $n \to \infty$,

$\phi(t)<t$

finite numbers of mapping from $X$ into $[0, \infty)$

bounded subset of $X$

bounded subset of $B$.

Measure of Noncompactness

Seperation

summation

product sum

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