$$
\begin{array}{ccc}
\mathbb{N} & & \\
 & \searrow^{a_{\cdot}} & \\
\sim \Big\downarrow & \bigwedge \text{ Folge} & \mathbb{R} \\
\underset{\text{monoton}}{\bigvee} & \text{Teilfolge} & \\
\mathbb{N} & \nearrow_{a_{\cdot\,\sim}} & \\
\end{array}
$$

$$
a_{\mathbb{N}+m} = \frac{a_n}{n \geqslant m} \sqsubseteq \mathbb{R}
$$

$$
\text{If } \bigwedge_{m\,\in\,\mathbb{N}} \ \bigvee_{\not{m}\,\geqslant\,m} a_{\not{m}} = \max a_{\mathbb{N}+m} \implies a_{\not{\mathbb{N}}} \searrow
$$

$$
m \leqslant n \implies a_{\mathbb{N}+m} \supset a_{\mathbb{N}+n} \implies a_{\not{m}} = \max a_{\mathbb{N}+m} \geqslant \max a_{\mathbb{N}+n} = a_{\not{\mathbb{N}}} \implies a_{\not{\mathbb{N}}} \searrow
$$

$$
\text{If } \bigvee_{\ell\,\in\,\mathbb{N}} a_{\mathbb{N}+\ell} \text{ ohne max} \implies \bigwedge_{m\,\geqslant\,\ell} a_{\mathbb{N}+m} = a_{\mathbb{N}+\ell} \ \cup \ \underbrace{a_\ell\cdot\!\cdot a_{m-}} \text{ ohne max}
$$

$$
\bigvee_{j_0\,>\,\ell} a_{j_0} > a_\ell \implies a_{\mathbb{N}+j_0} \text{ ohne max} \implies \bigvee_{j_1\,>\,j_0} a_{j_1} > a_{j_0} \implies \cdots \implies a_{\mathbb{N}+j_m} \text{ ohne max} \implies \bigvee_{j_{m+}\,>\,j_m} a_{j_{m+}} > a_{j_m}
$$

$$
\implies \begin{cases} j_0 < j_1 < \cdot\cdot < j_m < \cdot\cdot \\ a_{j_0} < a_{j_1} < \cdot\cdot < a_{j_m} < \cdot\cdot \end{cases}
$$

$$
{}^a\mathbb{R}^b \text{ cpt}
$$

$$
a \leqslant a_n \leqslant b \implies \underset{\text{Teilfolge}}{\overset{\text{monoton}}{\bigvee}} a \leqslant a_{\not{\mathbb{N}}} \leqslant b \underset{\text{MCT}}{\implies} a_{\not{\mathbb{N}}} \searrow c \in \mathbb{R} \underset{C\,>}{\implies} a \leqslant c \leqslant b
$$