$$\begin{cases} \daleth \wedge \gimel \underset{\text{comm}}{=} \gimel \wedge \daleth \\ \daleth \vee \gimel \underset{\text{comm}}{=} \gimel \vee \daleth \end{cases}$$

$$\begin{cases} \underbrace{\daleth \wedge \gimel} \wedge \beth \underset{\text{ass}}{=} \daleth \wedge \underbrace{\gimel \wedge \beth} \\ \underbrace{\daleth \vee \gimel} \vee \beth \underset{\text{ass}}{=} \daleth \vee \underbrace{\gimel \vee \beth} \end{cases}$$

$$\underbrace{\daleth \wedge \gimel} \vee \daleth \underset{\text{Abs}}{=} \daleth \wedge \underbrace{\gimel \vee \daleth}$$

$$\daleth \wedge \daleth \underset{\text{idem}}{=} \daleth \underset{\text{idem}}{=} \daleth \vee \daleth$$

$$\daleth \underset{\text{Abs}}{=} \daleth \wedge \overbrace{\underbrace{\daleth \wedge \daleth} \vee \daleth} \underset{\text{Abs}}{=} \daleth \wedge \daleth$$

$$\daleth \underset{\text{Abs}}{=} \daleth \vee \overbrace{\underbrace{\daleth \vee \daleth} \wedge \daleth} \underset{\text{Abs}}{=} \daleth \vee \daleth$$

$$\daleth \wedge \gimel = \daleth \Leftrightarrow \daleth \vee \gimel = \gimel \underset{\text{def}}{\Leftrightarrow} \daleth \leqslant \gimel$$

$$\daleth \wedge \gimel = \daleth \Longrightarrow \daleth \vee \gimel = \underbrace{\daleth \wedge \gimel} \vee \gimel \underset{\text{comm}}{=} \underbrace{\gimel \wedge \daleth} \vee \gimel \underset{\text{Abs}}{=} \gimel$$

$$\daleth \vee \gimel = \gimel \Longrightarrow \daleth \wedge \gimel = \daleth \wedge \underbrace{\daleth \vee \gimel} \underset{\text{comm}}{=} \daleth \wedge \underbrace{\gimel \vee \daleth} \underset{\text{Abs}}{=} \daleth$$

$$\daleth = \gimel \Leftrightarrow \daleth \wedge \gimel = \daleth \vee \gimel$$

$$\begin{cases} \daleth \\ \gimel \end{cases} \leqslant \daleth \vee \gimel = \daleth \wedge \gimel \leqslant \begin{cases} \gimel \\ \daleth \end{cases} \Longrightarrow \daleth \leqslant \gimel \leqslant \daleth \Longrightarrow \daleth = \gimel$$

$\leqslant$ Ordnung

$$\daleth \wedge \daleth = \daleth \Longrightarrow \daleth \leqslant \daleth$$

$$\daleth \leqslant \gimel \leqslant \daleth \Longrightarrow \daleth = \daleth \wedge \gimel = \gimel \wedge \daleth = \gimel$$

$$\daleth \leqslant \gimel \leqslant \beth \Longrightarrow \daleth \wedge \beth = \underbrace{\daleth \wedge \gimel}_{=\daleth} \wedge \beth \underset{\text{ass}}{=} \daleth \wedge \underbrace{\gimel \wedge \beth}_{=\gimel} = \daleth \wedge \gimel = \daleth \Longrightarrow \daleth \leqslant \beth$$

$\leqslant$ Verbands-Ordnung

$$\aleph = \aleph \wedge \underbrace{\beth \vee \aleph} = \aleph \wedge \underbrace{\aleph \vee \beth} \Longrightarrow \aleph \leqslant \aleph \vee \beth \geqslant \beth \Longrightarrow \aleph \vee \beth \text{ ob Schr}$$

$$\aleph \leqslant \gimel \geqslant \beth \Longrightarrow \aleph \vee \gimel = \gimel = \beth \vee \gimel \Longrightarrow \underbrace{\aleph \vee \beth} \vee \gimel = \aleph \vee \underbrace{\beth \vee \gimel} = \aleph \vee \gimel = \gimel \Longrightarrow \aleph \vee \beth \leqslant \gimel \Longrightarrow \aleph \vee \gimel = \sup \aleph\colon \beth$$

$$\text{analog } \aleph \wedge \beth = \inf \aleph\colon \beth$$

$$\aleph \leqslant \beth \Longrightarrow \begin{cases} \aleph \wedge \gimel \leqslant \beth \wedge \gimel \\ \aleph \vee \gimel \leqslant \beth \vee \gimel \end{cases}$$

$$\aleph \wedge \gimel = \underbrace{\aleph \wedge \beth} \wedge \gimel \underset{\text{idem}}{=} \underbrace{\aleph \wedge \beth} \wedge \underbrace{\gimel \wedge \gimel} \overset{\text{comm}}{\underset{\text{ass}}{=}} \underbrace{\aleph \wedge \gimel} \wedge \underbrace{\beth \wedge \gimel} \leqslant \beth \wedge \gimel$$

$$\beth \vee \gimel = \underbrace{\aleph \vee \gimel} \vee \gimel = \underbrace{\aleph \vee \gimel} \vee \underbrace{\gimel \vee \gimel} \overset{\text{comm}}{\underset{\text{ass}}{=}} \underbrace{\aleph \vee \gimel} \vee \underbrace{\beth \vee \gimel} \geqslant \aleph \vee \gimel$$

$$\text{semi-distr} \begin{cases} \aleph \wedge \underbrace{\beth \vee \gimel} \geqslant \underbrace{\aleph \wedge \beth} \vee \underbrace{\aleph \wedge \gimel} \\ \aleph \vee \underbrace{\beth \wedge \gimel} \leqslant \underbrace{\aleph \vee \beth} \wedge \underbrace{\aleph \vee \gimel} \end{cases}$$

$$\beth \leqslant \beth \vee \gimel \Longrightarrow \aleph \wedge \beth \leqslant \aleph \wedge \underbrace{\beth \vee \gimel} \geqslant \aleph \wedge \gimel \Longleftarrow \beth \vee \gimel \geqslant \gimel$$

$$\beth \geqslant \beth \wedge \gimel \Longrightarrow \aleph \vee \beth \geqslant \aleph \vee \underbrace{\beth \wedge \gimel} \leqslant \aleph \vee \gimel \Longleftarrow \beth \wedge \gimel \leqslant \gimel$$