$$R\colon \leqslant \text{ o-field}$$

$$\mathfrak{h}\colon\mathfrak{h} \in \mathfrak{H}\times\mathfrak{H} \xrightarrow[\text{metric}]{|} R_+ \ni \mathfrak{h}|\mathfrak{h}$$

$$\mathfrak{h}|\mathfrak{h} \underset{\text{d1}}{=} 0$$

$$\mathfrak{h}|\mathfrak{k} = 0 \underset{\text{asymm}}{\Longrightarrow} \mathfrak{h} = \mathfrak{k}$$

$$\mathfrak{h}|\mathfrak{k} \underset{\text{d2}}{=} \mathfrak{k}|\mathfrak{h}$$

$$\mathfrak{h}|\mathfrak{k} \underset{\text{d3}}{\leqslant} \mathfrak{h}|\mathfrak{h} + \mathfrak{k}|\mathfrak{k}$$

$$\mathfrak{H}^{r}_{\leqslant\mathfrak{o}} = \frac{\mathfrak{h} \in \mathfrak{H}}{\mathfrak{h}|\mathfrak{o} \leqslant r} \text{ center } \mathfrak{o} \text{ radius } r$$

$$\overline{\mathfrak{h}|\mathfrak{k} - \mathfrak{k}|\mathfrak{k}} \leqslant \mathfrak{h}|\mathfrak{h}$$

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oben : $\quad \mathfrak{h}|\mathfrak{k} \underset{\text{trans}}{\leqslant} \mathfrak{h}|\mathfrak{h} + \mathfrak{k}|\mathfrak{k} \Longrightarrow \mathfrak{h}|\mathfrak{k} - \mathfrak{k}|\mathfrak{k} \leqslant \mathfrak{h}|\mathfrak{h}$

unten : $\quad -\underbrace{\mathfrak{h}|\mathfrak{k} - \mathfrak{k}|\mathfrak{k}} = \mathfrak{k}|\mathfrak{k} - \mathfrak{h}|\mathfrak{k} \underset{\text{oben}}{\leqslant} \mathfrak{k}|\mathfrak{h} \underset{\text{symm}}{=} \mathfrak{h}|\mathfrak{h}$