

$$\mathfrak{h} \xrightarrow[\text{inj}]{\mathcal{U}} \mathfrak{h} \Leftrightarrow \bigwedge_{\mathfrak{h}} \mathfrak{h}\mathcal{U} = \mathfrak{h}'\mathcal{U} \Rightarrow \mathfrak{h} = \mathfrak{h}' \text{ ein-eindeutig}$$

$$\Leftrightarrow \underbrace{\mathcal{U} \times \mathcal{U}}_{\Delta} = \Delta$$

$$\mathfrak{h} \xrightarrow[\text{inj}]{\mathcal{U}} \mathfrak{h} \xrightarrow[\text{inj}]{\mathcal{U}'} \mathfrak{h}$$

$$\mathfrak{h} \xrightarrow[\text{inj}]{\mathcal{U} \mathcal{U}'}$$

$$\mathcal{U} \mathcal{U}' \text{ inj} \Rightarrow \mathcal{U} \text{ inj}$$

$$\mathfrak{h} \blacktriangleleft \mathfrak{h} = \left\{ \mathfrak{h} \xrightarrow[\text{inj}]{\mathcal{U}} \mathfrak{h} \right\}$$