

$$\begin{array}{ccc}
 & 1_{\mathcal{C}} & \\
 \mathcal{C} & \xrightarrow{\quad} & \mathcal{C} \\
 & \alpha \Downarrow \cong & \\
 & \text{GF} &
 \end{array}$$

$$\begin{array}{ccc}
 & 1_{\mathcal{D}} & \\
 \mathcal{D} & \xrightarrow{\quad} & \mathcal{D} \\
 & \beta \Downarrow \cong & \\
 & \text{FG} &
 \end{array}$$