

$$\begin{array}{ccc}
 \mathbf{C}_1 & \xrightarrow[\text{Cat}]{f_1} & \mathbf{D}_1 \\
 \downarrow F & & \uparrow G \\
 \mathbf{C}_2 & \xrightarrow[f_2]{\text{Cat}} & \mathbf{D}_2
 \end{array}$$