

$$\begin{array}{ccc}
 C_1 & \xrightarrow[\text{Cat}]{f_1} & D_1 \\
 \downarrow \scriptstyle F \text{ Cat} & & \text{Cat} \uparrow \scriptstyle G \\
 C_2 & \xrightarrow[\scriptstyle f_2]{\text{Cat}} & D_2 \\
 \downarrow \scriptstyle H \text{ Cat} & & \text{Cat} \uparrow \scriptstyle I \\
 C_3 & \xrightarrow[\scriptstyle f_3]{\text{Cat}} & D_3
 \end{array}$$

$$\begin{array}{ccc}
 C_1 & \xrightarrow[\text{Cat}]{f_1} & D_1 \\
 \downarrow \scriptstyle F \circ H \text{ Cat} & & \text{Cat} \uparrow \scriptstyle I \circ G \\
 C_3 & \xrightarrow[\scriptstyle f_3]{\text{Cat}} & D_3
 \end{array}$$