

$$\begin{array}{ccccccc}
A_2 & \xrightarrow{\lambda} & E & \longrightarrow & C_1 & \longrightarrow & \\
\parallel & & \downarrow \psi & & \downarrow f_C & & \\
A_2 & \xrightarrow{i_2} & B_2 & \xrightarrow{p_2} & C_2 & \longrightarrow & \\
& & \downarrow \varphi & & \downarrow g_C & & \\
& & C_3 & \xlongequal{\quad} & C_3 & & \\
& & \downarrow \eta & & & & 
\end{array}$$

$$\begin{array}{ccccccc}
B_1 & \longrightarrow & E & \xrightarrow{\mu} & A_3 & \xrightarrow{(i_3)^* \delta_2} & \\
\parallel & & \downarrow \psi & & \downarrow i_3 & & \\
B_1 & \xrightarrow{f_B} & B_2 & \xrightarrow{g_B} & B_3 & \xrightarrow{\delta_2} & \\
& & \downarrow \varphi & & \downarrow p_3 & & \\
& & C_3 & \xlongequal{\quad} & C_3 & & \\
& & \downarrow \eta & & & & 
\end{array}$$