

$$\begin{array}{ccccc}
A_1 & \overset{f_A}{\dashrightarrow} & A_2 & \overset{g_A}{\dashrightarrow} & A_3 \xrightarrow{\varepsilon_A} \\
\downarrow i_1 & & \downarrow \lambda & & \parallel \\
B_1 & \longrightarrow & E & \xrightarrow{\mu} & A_3 \\
\downarrow p_1 & & \downarrow & & \\
C_1 & \xlongequal{\quad} & C_1 & & \\
& & \downarrow & & 
\end{array}$$