

$$\begin{array}{ccccccc}
0 & \longrightarrow & A_1 & \xrightarrow{\ell_1} & B & \xrightarrow{\pi_2} & A_2 \longrightarrow 0 \\
& & \downarrow \mathbf{1}_{A_1} & & \downarrow \varphi & & \downarrow \mathbf{1}_{A_2} \\
0 & \longrightarrow & A_1 & \xrightarrow{f} & B & \xrightarrow{g} & A_2 \longrightarrow 0
\end{array}$$