

$$\begin{array}{ccccc}
 0 & \longrightarrow & B & \stackrel{\quad}{=} & B \\
 \downarrow 0 & & \downarrow & & \downarrow g \\
 A & \xrightarrow{\quad f \quad} & B & \xrightarrow{\quad g \quad} & C
 \end{array}$$