

$$\begin{array}{ccccccc}
 & & \ker g & \xlongequal{\quad} & \ker g & & \\
 & & \downarrow & & \downarrow & & \\
 \bullet & \xrightarrow{\quad f \quad} & \bullet & \longrightarrow & \text{cok } f & \xrightarrow{\quad \delta_f \quad} & \\
 \parallel & & \downarrow g & & \downarrow & & \\
 \bullet & \xrightarrow{\quad g \circ f \quad} & \bullet & \longrightarrow & \text{cok } g \circ f & \xrightarrow{\quad \delta_{g \circ f} \quad} & \\
 & & \downarrow \delta_g & & \downarrow \delta_c & &
 \end{array}$$