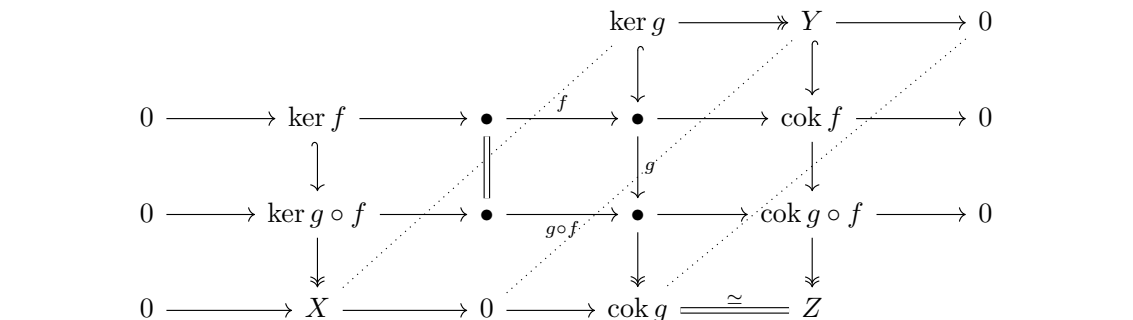

$$0 \longrightarrow \ker f \longrightarrow \ker g \circ f \xrightarrow{X} \ker g \xrightarrow{Y} \operatorname{cok} f \longrightarrow \operatorname{cok} g \circ f \longrightarrow \operatorname{cok} g \longrightarrow 0$$