$0 \longrightarrow \operatorname{Hom}_{R}(M, M_{1}) \xrightarrow{i_{*}} \operatorname{Hom}_{R}(M, M_{1} \oplus M_{2}) \xrightarrow{\pi_{*}} \operatorname{Hom}_{R}(M, M_{2}) \longrightarrow 0$