

$$0 \longrightarrow \operatorname{Hom}(R^{(C)}, N) \longrightarrow \operatorname{Hom}(R^{(B)}, N) \longrightarrow \operatorname{Hom}(R^{(A)}, N) \longrightarrow 0$$

$$\downarrow$$

$$\downarrow$$

$$\downarrow$$

$$0 \longrightarrow \operatorname{Hom}(\operatorname{Ker} C, N) \longrightarrow \operatorname{Hom}(\operatorname{Ker} B, N) \longrightarrow \operatorname{Hom}(\operatorname{Ker} A, N).$$