MATH 101: ALGEBRA I HOMEWORK, DAY #23

Problem JV23.A. Let R be a ring, and let D, L, M, N be R-modules. Show that if $0 \to L \xrightarrow{\psi} M \xrightarrow{\phi} N$

is exact, then

 $\operatorname{Hom}_{R}(D,L) \xrightarrow{\psi_{*}} \operatorname{Hom}_{R}(D,M) \xrightarrow{\phi_{*}} \operatorname{Hom}_{R}(D,N)$ is exact. [Hint: check your work using Theorem 28.]

Date: Assigned Wednesday, 19 October 2016; due Friday, 21 October 2016.