Mini-Homework 3

Will Boland

January 24, 2019

Claim: This is valid
$\neg\neg A \wedge \neg B, A \rightarrow C \vdash C \wedge \neg B$

Proof
Assume $\neg\neg A \wedge \neg B$ and $A \rightarrow C$.
Since $\neg\neg A \wedge \neg$ B,we know $\neg\neg A$ and $\neg B$ ($\wedge$-elimination)
From $\neg\neg A$, we get A (Double negation)
Applying $A \rightarrow C$ to A gives us C (Application, or $\rightarrow$-elim)
Because C and $\neg B$, $C \wedge \neg B$. ($\wedge$-introduction)$\square$