

Exercise sheet 3

Set theory and Logic, MTH303

1. Show that $\{\forall x(\phi \rightarrow \psi), \forall x\phi \models \forall x\psi\}$
2. Prove that $\phi \not\models \forall x\phi$ if x is free in ϕ but $\phi \models \forall x\phi$ if x is not free in ϕ