

COMP 681 Formal Methods Spring 20058 Recitation 12

Prove that the following are valid inferences.

1. $\forall x \bullet p(x) \Rightarrow q(x), \neg \exists x \bullet q(x) \wedge \neg r(x), \exists x \bullet p(x) \wedge s(x) \quad |- \quad \exists x \bullet r(x) \wedge s(x)$

2. $\forall x \bullet p \Rightarrow (q(x) \Rightarrow r(x)), \forall x \bullet r(x) \Rightarrow s(x) \quad |- \quad \forall x \bullet p \Rightarrow (q(x) \Rightarrow s(x))$