For each of the following pairs consisting of a set of schemata X and a schema S determine whether X implies S. If so, provide a deduction to establish the implication. If not, specify a structure which makes S false and all the schemata in X true.

1. $X : \{(\forall x)Rxx, \neg(\forall x)(\forall y)Rxy\}$
   $S : \neg(\exists x)(\forall y)x = y$

2. $X : \{(\exists x)(\forall y)Lxy\}$
   $S : (\forall x)(\exists y)Lxy$

3. $X : \{(\forall x)(\exists y)Lxy\}$
   $S : (\exists x)(\forall y)Lxy$

4. $X : \{(\forall x)(Fx \supset (\exists y)(\neg Fy \wedge (\forall z)(Rxz \equiv z = y)))$,
   $(\forall x)(\neg Fx \supset (\exists y)(Fy \wedge (\forall z)(Rzx \equiv z = y)))$,
   $(\forall x)(\forall y)(\forall z)((Pxy \wedge Pxz) \supset y = z), (\forall x)(\exists y)(Fy \wedge Pyx)\}$
   $S : p \wedge \neg p$

5. $X : \{(\exists x)Fx \wedge (\forall x)(\forall y)((Fx \wedge Fy) \supset x = y)\}$
   $S : (\exists x)(\forall y)(Fy \equiv x = y)$