logic pset5

Resources: Chapter 6 (pp 99-113) of *How Logic Works*.

Prove the following sequents using the propositional logic rules plus UE, UI, EI, and EE.

1. $\exists x(Fx \to Gx) \vdash \forall xFx \to \exists xGx$

2. $\forall x \exists y(Fy \to Gx) \vdash \forall yFy \to \forall xGx$

3. $\exists x(Fx \lor Gx), \neg \exists xFx \vdash \exists yGy$

4. $P \to \exists xFx \vdash \exists x(P \to Fx)$